1.3.2 Number of students undertaking project work in the Department of BCA

Sl. No	STUDENT NAME	PROJECT TITLE	GUIDE NAME
1	ROHIT KUMAR	Front End Development for Online Blogging Site	Mr. Ramakrishna Reddy Kundur
2	KALPANA CHAUHAN		
3	UMA PATIDAR		
4	EMMANUEL SIBI THOMAS	Location based smart system	Mr. Ramakrishna Reddy Kundur
5	ANKIT L	Power Lifting Database Analyzation	Mr. Ramakrishna Reddy Kundur
6	SHARATH GOWDA S		
7	BHUVAN GOWDA S		
8	DHANANJAYA RAO S		
9	ANUPAM ATUL	Wine Quality Prediction	Sridevi G
10	SHRUTHI KUMARI		
11	SOUNDARYA		
12	PANKAJ GAUTAM		
17	VIJAY KUMAR	Online Chatting platform	Sridevi G
18	GIRISHA S R	Food Order Analysis	Yamuna P
19	RASHWA M		
20	DARSHAN M R		
21	BULLE PURUSHOTHAM		
22	SANDESH KUMAR	Insurance Cost Prediction	Yamuna P
23	SHUBHAM KUSHWAHA		
24	ROHIT RAJ	NGO Website Design	Yamuna P
25	ABHIGYAN ARYA		
26	ARUN KUMAR		
27	B MYTHRI BAI	Weather Application	Shruthi H K
28	SHREENIDHI		
29	J NIKITHA		
30	SIDDESH K B		
31	CHETHAN RAJ L	E-Commerce	Shruthi H K
32	LIKITH M S		
33	MANU N		
34	ANUPAN SANKAR		
35	SACHISH CHOUDHARY	Analysis of E commerce	Ranjana K K
36	SIMON GURUNG		
37	ABHISHEK S	Online Movie ticket book	Ranjana K K
38	NIRANJAN S V		
39	KUSHAL C RAJ		

40	ABHISHEK J	Facial Detection Using PI	Ranjana K K
41	ADITYA H H		
42	AKSHAY C		
43	VIVEK R		
44	PRERANA V PATEL	Exploring the Analysis of E-Commerce	Aditya U Diwan
45	KUMAR SHIVAM		
46	SUJAL GUPTA		
47	ROHIT KUMAR		
48	RAHUL P	Hospital Management System	Aditya U Diwan
49	TEJESH N		
50	JANARDHAN		
51	SAKSHYAM MAN PRADHAN	Growth in E Commerce	Aditya U Diwan
52	NEHA KUMARI SAH		
53	ANIMESH KUMAR		
54	HEMANTH S S	Library Management System	Annapa Harika Reddy
55	C M CHANDAN		
56	SANTHOSH R		
57	AJAY SRIKANT B H		
58	DEEPAK R	Student Performance and Analysis	Annapa Harika Reddy
59	SHAKTHIVEL B		
60	ATHIL S		
61	ADITHYA VIJAY	Food Discount Extension	Annapa Harika Reddy
62	KOULIK DE SARKAR		
63	MEDHAVI MEHROTRA		
64	BALAGOPAL RAVI	Water Level Indicator	Arathi P H
65	BINAL BABU		
66	SAVIO TOM		
67	KIRAN S PILLAI		
68	SUSHIL M S		
69	PRANTO BHUMIK	Transport Magic	Arathi P H
70	HADHI HASSAN	Online Resturant Management System	Arathi P H
71	MUHAMMED RAHIL		
72	MUHAMMED FARHAN C		
73	MUHAMMED FAISAL		
74	JATHIN D	IoT Enabled Fire Alarm	Chitra E S
75	VIJAYKUMAR		
76	VAIBHAV M		
77	M NITISH KUMAR		

78	ABHISHEK RANJAN	Heart Monitoring System	Chitra E S
79	SUMAN KUMARI		
80	PRATHIBHA SHARMA		
81	MADHUBALA		
82	SOWJANYA B C	Big Mart Sale and Prediction	Chitra E S
83	SNEHA K		
84	JINSON JOSE	Automobile Prediction	Aswathy Ravi
85	SIVAPRASAD S P		
86	SANJAY M		
87	ASHISH CHOUDHARY	Student Management System	Aswathy Ravi
88	LAXMI MAITY		
89	DUGULAM MANISHA		
90	SARANG		
91	ASWANTH M T	Blood Donation Probabilities And no.of Possible Donars	Aswathy Ravi
92	MUHAMMED FAYID		
93	DEEPAK PRADEEP		
94	HELAN RAJ C		
95	VIGNESWARI A	Analyse Company's Profit and Loss	Rajeshwari Shetty
96	ANUSHA H H		
97	DIVYANJALI DILEEP		
98	KUMAR SHUBHAM BIND		
99	SABNAM RAJORIA	Cardio Vascular Disease Prediction Using Visualization and ML	Rajeshwari Shetty
100	HIMANSHU SHEKHAR		
101	RISHAB AGARWAL		
102	HEMANTH T N		
103	HANEEN A P	Real Time Criminal Identification	Rajeshwari Shetty
104	MOHAMMED SHAMEEM		
105	MOHAMMED FAZIL		
106	SAIBA S	Investments and Sales Prediction Using Machine Learning	Aswathi Raveendran
107	ARSHAL C		
108	REHAN REKASH		
109	HEMARIS M P		
110	ROHIT CHOUBEY	Clone of Instagram Using Figma	Aswathi Raveendran
111	MISHRA SUPRIM HARISHYAM		
112	RAVIKUMAR C	ISL MEGA AUCTION	Aswathi Raveendran
113	ABHINAV KUMAR	Clone of Instagram Using Figma	Aswathi Raveendran
114	ABHISHEK GOTAGI	ISL MEGA AUCTION	Aswathi Raveendran

115	DILRAG MADHURESH	Real Time Criminal Identification	Ishwari Banjare
116	SUNKARA ARUN SAI		
117	AKHIL SHAJI		
118	BASIL SIBY		
119	HEIGRUJAM SHEILAJA DEVI	E Commerce	Ishwari Banjare
120	JASEEM ARSHAN N		
121	ANUSHA		
122	ANEESH SUGUNAN		
123	MUHAMMED RAZAL	Online Resturant Management System	Shivi Dixit
124	MUHAMMED RAHAN		
125	THANSEER UL FAUD		
126	GAGANA S	Flight Fare Prediction	Shivi Dixit
127	PRUTHVI V		
128	MINCHITHA S		
129	SHRUTHI H S		
130	JOSHIN SAJI	Twitter Clone using MERN Stack	Shivi Dixit
131	FERIL SUNU		
132	SIDDARTH S		
133	AMARNATH		
134	NIKKI KUMARI P	Social Media Usage	Abiya K P
135	NIVEDITHA Y		
136	UJWALA V		
137	SWATHI A		
138	SHAIK SANA	Spotify Analysis	Abiya K P
139	SHAIK MEHNAZ		
140	SHAIK RIHA SHARMIN		
141	SHAIK FAYAS MASTAN		
142	LAKSHMI NARAYANA	ISL MEGA AUCTION	Aswathi Raveendran
143	ROHIT KUMAR	Flutter Application Devel	Abiya K P
144	ROSHAN SHAJI	Employee Management	Padmaja
145	RINCHU GIREESH		
146	MUHAMMED ZIDAN		
147	JOSE ZACHARIA		
148	AKIN T ABHRAHAM	AI and ML Driven Exploration of RCB's	Padmaja
149	N HITHYSHI	2022 IPL Statistics	
150	SHANKARAMMA		
151	SREEDAS A	Ship Classification Using Vision Transformation	Padmaja

152	NAWANG TSINDU SANGCHOJU	Netflix Dataset Analysis	Smitha Shivaswamy
154	PAWAN KC	Online Social	Smitha Shivaswamy
155	YASHWANTH S	Networking Site	
156	AZMAN SHAIKH	Study Performance Data Analysis and Visualization	Smitha Shivaswamy
157	C PAWAN KRISHNA		
158	DEEPANSHU TRIVEDI		
159	AZAZ AHMAD MUSALMANU		
160	RISHAB CHOUDHARY	VX LAB	Smitha Shivaswamy
161	MEGHA S	Indian Metro Data	Boya Durga
162	MEGHANA M		
163	VAISHNAVI SINGH N		
164	RAHUL DORAI CHINTHALA		
165	SOVIT ROY	Individual Advertisement Website	Boya Durga
166	SANTAM MOHANTA		
167	BISHNU JIBAN CHAKRABORTY		
168	SYED AZAM HUSSAIN		
169	ABDULLA UMAR	Trip Budget Application	Boya Durga
170	PRABHANJANA R	Sneaker Store landing page	Moulali
171	RAHUL KUMAR		
172	NIKHIL SINGH		
173	B LUCKY	Data Set Explanation	Moulali
174	MULEPHANINDRA KUMAR REDDY		
175	MAMILLAPALLI CHARAN		
176	SUBHASH CHANDRA		
177	RASHMI P R	Smart Car Parking System	Mahesh D M
178	BONTHA BHAVANA		
179	P BALAJI		
180	J HARI		
181	ANSON BINOY	Driver Drowsing Detection System	Mahesh D M
182	NAKUL P		
183	SAFWAN ABDULSALAM		
184	ARUN A		
187	T M JAGAN MOHAN REDDY	IPL Mega Auction 2022 Analysis	Sridevi G
188	DHEERAJ M RAJPUROHIT		
189	SOMANNA A V		
190	DARSHANNATH R		

191	SHAKTHI.J	Heart Attack Prediction	Pranitha P
192	BHAVANA.R		
193	SHANAS BEGUM		
194	SINDHU.H		
195	SAVARALA VAKULA	Financial Prediction in Retail	Pranitha P
196	GOKUL GOPINATH		
200	DHANUSH R	Education Data set analyzation	Madhushree M K
201	VINAY H J		
202	CHIDANANDA K C		
203	VARUN S GOWDA		
204	ALOK VISWAKARAMA	Student Database Management System	Madhushree M K
205	PRAJAPATHI DARSHAN		
206	ADARSH JAGADISH YADAV		
207	SAURAVDEEP YADAV		
216	ABDUL VHARIS A S	Academic AI	Geetha R
217	VISHNU C		
218	YADHU VINOD		
219	ADHIL MOHAMMED VK	Nose Space	Geetha R
220	AFEEF HASHIM ELAMIN		
221	JOYAL SUSILAN		
222	MOHAMED FARIS		
223	PUNITH K M	Weather Analysis	Geetha R
224	UDAY KUMAR S		
225	RAKSHITH AN		
226	MANOJ D B		

ONLINE EXAM PORTAL

A MAIN PROJECT REPORT

Submitted by

ROHIT KUMAR -U18AJ21S0379

KALPANA CHAUHAN-U18AJ21S0281

UMA PATIDAR-U18AJ21S0291

A report submitted in partial fulfillment of the requirements for the Award of Degree of

BACHELOR OF COMPUTER APPLICATION

Under the guidance of

K. Ramakrishna Reddy

(Assistant Professor, Department of Computer Application, AIGS)

DEPARTMENT OF COMPUTER APPLICATION
ACHARYA INSTITUTE OF GRADUATE STUDIES

(NAAC Re-Accredited 'A++' and Affiliated to Bengaluru City University)

#89/90, Soladevanahalli, Hesaraghatta road, BENGALURU – 560107

2023-2024

DEPARTMENT OF COMPUTER APPLICATION

BONAFIDE CERTIFICATE

Certified that this project report **ONLINE EXAM PORTAL** is the Bonafide work of "**ROHIT KUMAR-(379), KALPANA CHAUHAN-(281), UMA PATIDAR-(291)**", who carried out the project work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

K. Ramakrishna Reddy
PROJECT GUIDE
Assistant Professor
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Prof. Ramakrishna C. N
HEAD OF THE DEPARTMENT
COMPUTER APPLICATION

Submitted for Semester Main-Project viva-voce examination held on _____

INTERNAL EXAMINER

EXTERNAL EXAMINER

Executive Summary

The Exam Portal project aims to revolutionize the traditional paper-based examination processes by developing an advanced online examination system. This comprehensive system addresses the limitations faced by conventional methods, providing an efficient and secure platform for conducting examinations. By leveraging modern technologies and methodologies, the Exam Portalenhances the overall educational experience for students and educators.

The Exam Portal web application is being featured in this document, which will include all characteristics and procedures which are required. This document includes acute information about the objectives, scope, technical details, and feasibility of the system. Online Examination Portal is very beneficial for educational institutes to formulate an entire exam, saving time to check the papers and concoct mark sheets. Online exam portal helps students to offer a quick and easy way to appear for the test. It also provides the results immediately after the examination with 100% accuracy and security. Students can enter to perform exams only with their valid username and password. This examination contains multiple-choice questions and an appropriate number of options.

To ensure a robust and secure backend infrastructure, the project utilizes Java Spring Boot for backend development and MySQL for database management. This combination guarantees data security, scalability, and reliability, facilitating seamless handling of exam-related information.

The front-end interface, developed using Angular, offers an intuitive and responsive user experience. With an engaging and seamless navigation system, the Exam Portal simplifies the exam-taking process for students and provides educators with efficient assessment management and evaluation capabilities.

Data collection involves both primary and secondary methods. Primary data is gathered through surveys, interviews, and feedback sessions with students, educators, and administrators, providing valuable insights into user preferences and requirements. Secondary data is obtained from relevantliterature, research papers, and case studies related to online examination systems, enriching the project's foundation.

As the sole developer of this college project, the Exam Portal represents a culmination of dedication, innovation, and technical expertise. The project's successful implementation promises to bring transformative changes to the examination process, offering remote access, scalability, and accuracy. By eliminating physical constraints and manual grading, the Exam Portal elevates the educational experience, ultimately contributing to the advancement of modern learning environments.

CONCLUSION

The emergence of technology has revolutionized various aspects of our lives, and education is no exception. The project "Exam Portal: An Advanced Online Examination System" was undertaken with the primary objective of addressing the limitations and challenges associated with traditional paper-based examination processes. The journey from conceptualization to implementation has been an exciting endeavor, resulting in the creation of a comprehensive online examination platform that promises to reshape the way assessments are conducted and managed.

Exam Portal represents a significant leap forward in the realm of education technology. By addressing the shortcomings of traditional examination methods and embracing modern technological advancements, this platform offers students and educators a dynamic and accessible solution. The successful execution of this project not only underscores the potential of online examination systems but also serves as a testament to the power of innovation and collaboration in transforming educational practices. As we move forward, the Exam Portal stands as a cornerstone for the future of assessments, promising to elevate the educational experience for allstakeholders involved.

The Exam Portal is a valuable tool that can help to improve the efficiency, security, and accessibility of online examinations. The system is user-friendly and scalable, and it can be used to handle a variety of assessment types. The Exam Portal has the potential to revolutionize the way that examinations are conducted, and it is a valuable tool for educational institutions and other organizations that conduct examinations.

LOCATION BASED SMART
ATTENDANCE USING FACE RECOGNITION

A Project Report

Submitted by:

EMMANUEL SIBI THOMAS (U18AJ21S0073)

In partial fulfillment of the requirements for award of the degree of

Bachelor of Computer Application

Under the guidance of

Mr. RAMAKRISHNA REDDY
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ACHARYA

ACHARYA INSTITUTE OF GRADUATE STUDIES
MANAGED BY
BENGULURU-560107, SOLADEVANHALLI
JULY-2024

ACHARYA INSTITUTE OF GRADUATE STUDIES

BENGALURU

ACHARYA

CERTIFICATE

This is to certify that the project entitled **"Location based smart attendance using face recognition"** is Submitted by Emmanuel Sibi Thomas towards Fulfilment of requirement for the award of the degree of Bachelor of Computer Application is a record of bona fide work carried out him/her during the academic year 2021-2024.

Project Guide

Head of The Department

Submitted for the Viva-Voice held on .... at................................

Internal Examiner

External Examiner

SYNOPSIS

"A Location-Based Smart Attendance System Using Face Recognition" presents a contemporary solution for managing attendance in diverse settings such as educational institutions, businesses, and events. The system integrates location-based services and facial recognition technology to streamline attendance tracking. In environments like marketing offices where manual attendance marking can lead to errors, this system mitigates inaccuracies. Facial recognition, a form of biometric artificial intelligence, identifies individuals by analyzing facial features from a database, offering rapid and accurate attendance management. The inclusion of location-based authentication further prevents cheating, ensuring attendance accuracy. The system employs deep learning techniques and high-quality cameras for precise face detection and recognition. With a frontend GUI built on Electron JS and a backend logic implemented in Python, the system facilitates seamless communication and attendance recording. Overall, this system optimizes attendance management through efficient, reliable, and technologically advanced methods.

9.   CONCLUSION

In summary, the Location-Based Smart Attendance System Using Face Recognition offers a contemporary and efficient solution to attendance record management across diverse sectors like education, businesses, and events. By amalgamating location-based services with facial recognition technology, this system simplifies the attendance tracking process and addresses concerns surrounding inaccuracies and fraudulent activities common in traditional systems.

Facial recognition technology, a form of Biometric Artificial Intelligence, plays a central role in accurately identifying individuals from digital images or video frames, ensuring the reliability of attendance records. The system's multi-step process involves face detection and recognition methods, leveraging advanced techniques like deep learning for heightened accuracy.

The system's architecture, comprising a frontend GUI and backend logic in Electron JS and Python respectively, facilitates seamless communication and efficient image analysis. Additionally, the integration of a high-quality camera enhances performance, while location-based authentication prevents unauthorized access or tampering of attendance data.

In conclusion, the Location-Based Smart Attendance System Using Face Recognition presents a robust and dependable solution for organizations seeking to streamline attendance management processes while minimizing errors and enhancing security

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DATA SCIENCE IN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

A Powerlifting Project Report

Submitted by

Ankith L - U18AJ21S0100
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Under the guidance of

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in partial fulfilment for the award of the degree of

BACHELOR OF COMPUTER APPLICATIONS
At

ACHARYA INSTITUE OF GRADUATE STUDIES

BENGALURU CITY UNIVERSITY

BENGALURU

June 2024

BACHELOR OF COMPUTER APPLICATIONS

ACHARYA INSTITUTE OF GRADUATE STUDIES

BENGALURU CITY UNIVERSITY

CERTIFICATE

This is to certified that the Data Science Project report "Data Analyzation using Machine Learning and Artificial Intelligence" being submitted by Ankith L – U18AJ21S0100, Dhananjay Rao S – U18AJ21S0089, Sharath Gowda S – U18AJ21S0024, Bhuvan Gowda S – U18AJ21S0123 in partial fulfilment of requirement for the award of degree of **Bachelor of Computer**

Applications is a bonafide work carried out under my supervision.

Mr. K. Ramakrishna Reddy
Assistant Professor,
Acharya Institute of Graduate Studies,
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Sir. Ramakrishna C N
Head of the Department,
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Submitted for Semester Main-Project viva-voce examination held on 8/7/24.

EXTERNAL EXAMINER

INTERNAL EXAMINER

ABSTRACT

In powerlifting, a competitive power sport, athletes perform three main lifts—squat, bench press, and deadlift—analyse powerlifting data using machine learning and artificial intelligence techniques to predict athlete performance, training methods, competition results to predict total weight lifted -And provides insight into modeling This abstract explores the application of data science methods to the analysis of a wide range of powerlifting data, including variables such as athlete demographics, competition results, and lift-specific issues Through exploratory data analysis (EDA), performance trends can be identified across different weight classes, age groups and genders, to shed light on optimal training regimens and performance metrics as well as predictive models using regression or classification algorithms that take into account an athlete's potential performance based on historical data Can make predictions, help coaches and athletes set realistic goals and refine training plans Techniques such as feature engineering and dimensional reduction for the model accuracy and interpretation increase, which is important for performance insights in sport analysis Furthermore, advances in artificial intelligence including deep learning models and natural language processing (NLP) for analysing athletes' expressions provide additional understanding and personalization of training and athlete development in Emphasizes connections between sport science and advanced research

Chapter-9. CONCLUSION

Analysing powerlifting data using techniques from artificial intelligence (AI) and machine learning (ML) offers profound insights into the sport, enabling athletes, coaches, and researchers to optimize training programs, enhance performance, and deepen understanding of physiological adaptations. This paper explores the application of AI and ML in powerlifting through data collection, preprocessing, modelling, and interpretation, highlighting key methodologies, challenges, and potential future directions.

Data Collection and Preprocessing

The foundation of any data-driven analysis in powerlifting begins with comprehensive data collection. This includes recording competition results, training logs, biomechanical measurements, and even environmental variables. Data preprocessing involves cleaning, normalization, and feature extraction to ensure that the data is suitable for modelling. Techniques such as time-series analysis may be employed to understand trends over training cycles, while feature engineering can uncover hidden patterns that influence performance outcomes.

Modelling Techniques

Machine learning models are instrumental in predicting performance metrics and identifying factors contributing to success in powerlifting. Regression models, such as linear regression or more advanced techniques like gradient boosting or neural networks, can predict competition outcomes based on historical data. Classification models can assess the likelihood of achieving specific performance milestones, such as qualifying for higher-level competitions. Furthermore, clustering techniques may uncover different athlete profiles based on training responses or competition strategies.

Performance Optimization

AI and ML empower athletes and coaches to optimize training strategies. Predictive models can recommend personalized training protocols based on an individual's physiological responses and historical performance data. For instance, by analysing trends in training volume, intensity, and recovery periods, ML algorithms can suggest adjustments to enhance strength gains or prevent overtraining. Real-time monitoring using wearable technology and IoT devices allows for continuous data collection, enabling adaptive coaching strategies that respond dynamically to an athlete's changing needs.

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Challenges and Considerations

Despite its potential, integrating AI and ML into powerlifting analysis presents several challenges. Data quality and quantity can vary significantly, affecting the robustness of predictive models. Overfitting to specific datasets or biases in training data may lead to inaccurate predictions or flawed recommendations. Ethical considerations regarding data privacy and the responsible use of athlete data also demand careful attention. Moreover, the interpretability of complex models remains a concern, as coaches and athletes need to understand the rationale behind recommendations to implement them effectively.

Future Directions

Looking forward, advancements in AI and ML promise to revolutionize powerlifting analysis. Incorporating techniques from deep learning, reinforcement learning, and natural language processing could provide deeper insights into biomechanics, nutrition, and psychological factors influencing performance. Collaborations between data scientists, coaches, and sports scientists will be crucial in developing comprehensive models that account for the multifaceted nature of athletic performance. Additionally, the integration of AI-driven decision support systems into coaching practices could democratize access to elite-level training insights, benefiting athletes across skill levels.

Conclusion

In conclusion, leveraging AI and ML in powerlifting data analysis offers a transformative approach to enhancing athletic performance and understanding the complexities of strength sports. By harnessing the power of data, athletes can optimize their training regimens, coaches can make more informed decisions, and researchers can uncover new insights into human performance. While challenges remain, the ongoing development of advanced analytical techniques and ethical frameworks promises a future where AI-driven insights empower athletes to reach their full potential in the sport of powerlifting.

WINE QUALITY PREDICTION

A MAIN PROJECT REPORT

Submitted by

ANUPAM ATUL(U18AJ21S0297)

SHRUTI KUMARI(U18AJ21S0324)

SOUNDARYA(U18AJ21S0327)

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in partial fulfillment for the award of the degree of

BACHELOR OF COMPUTER APPLICATIONS

Under the guidance of

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in

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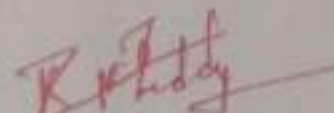
BONAFIDE CERTIFICATE
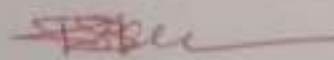
Certified that this project report **"WINE QUALITY PREDICTION"** is the bonafide work of **"ANUPAM ATUL,U18AJ21S0297","SHRUTI KUMARI , U18AJ21S0324","SOUNDARYA,U18AJ21S0327","PANKAJ GAUTAM , U18AJ21S0348"**who carried out the project work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

SRIDEVI G
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Assistant Professor
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Prof. Ramakrishnaa C. N
HEAD OF THE DEPARTMENT
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Submitted for Semester Main-Project viva-voce examination held on_____

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The wine quality prediction dataset focuses on red variants of Portuguese "Vinho Verde" wine, containing various physicochemical properties like acidity, sugar, pH, and alcohol content, along with a quality rating assigned by experts. The dataset presents a multifaceted challenge, as it requires analyzing the intricate relationships between these chemical properties and their impact on the overall quality of the wine. The dataset is typically used for classification or regression tasks, with the quality ratings being ordered but imbalanced, presenting an additional layer of complexity in the analysis.

The existing analysis of the winequalityN dataset reveals valuable insights into the factors influencing wine quality, bridging the gap between the art and science of winemaking. However, one significant disadvantage noted is the imbalance in the dataset, which can skew predictive models towards more common quality ratings, potentially leading to less accurate predictions for higher or lower quality wines. This imbalance poses a challenge in building robust models that generalize well across all quality categories, highlighting the need for advanced techniques to address this issue.

Despite these challenges, the analysis offers practical benefits for the wine industry, including helping winemakers maintain consistency and improve their products by understanding the key factors that contribute to high-quality wine. Moreover, consumers benefit from data-driven insights that aid in making informed purchasing decisions. The integration of machine learning and data science into winemaking not only enhances product quality but also promotes a more scientific approach to an age-old craft, underscoring the importance of leveraging data for continual improvement in the industry.

CONCLUSION

The conclusion from wine quality prediction datasets indicates that certain parameters significantly influence the quality of wine. Parameters such as alcohol content, acidity levels, sugar content, and pH are crucial predictors of wine quality. By optimizing these factors, particularly by ensuring a balanced acidity and higher alcohol content, the quality of wine can be enhanced. Additionally, other variables like sulfur dioxide levels and chlorides also play a role but to a lesser extent. Incorporating a more comprehensive set of parameters and fine-tuning them can lead to a more accurate prediction and production of high-quality wine.

1. To know which type of wine's quality is good in the given dataset

```python
# Group the data by wine type
grouped_data = data_cleaned1.groupby('type')

# Calculate the average quality for each wine type
average_quality = grouped_data['quality'].mean()

# Print the average quality for each wine type
print("Average Quality by Wine Type:")
print(average_quality)

Average Quality by Wine Type:
type
red      5.623252
white    5.855164
Name: quality, dtype: float64
```

2. To know how much amount of parameters we should add so that it becomes a good quality wine.

4

WEB CHAT APPLICATION

A MAIN PROJECT REPORT

Submitted by

VIJAY KUMAR

(U18AJ21S0381)

in partial fulfillment for the award of the degree of

BACHELOR OF COMPUTER APPLICATIONS

Under the guidance of

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in

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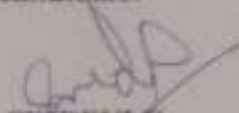
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DEPARTMENT OF COMPUTER APPLICATION
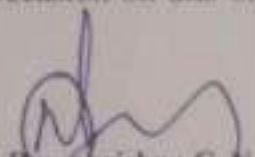
BONAFIDE CERTIFICATE

Certified that this project report **"WEB CHAT APPLICATION"** is the bonafide work of **"VIJAY KUMAR, U18AJ21S0381"** who carried out the project work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.
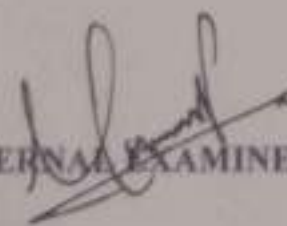
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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The web chat application is designed to provide users with a seamless and interactive communication platform. Developed using HTML, CSS, JavaScript, React, and Firebase, this application leverages modern web technologies to deliver a robust and user-friendly experience. The application's architecture ensures real-time communication, allowing users to send and receive messages instantly. By utilizing Firebase's backend services, the application benefits from a reliable and scalable infrastructure that handles user authentication, data storage, and real-time updates efficiently.

In the front end, React is employed to create a dynamic and responsive user interface. React's component-based architecture facilitates the development of reusable UI elements, which enhances maintainability and scalability. HTML and CSS are used to structure and style the application, ensuring it is visually appealing and intuitive to navigate. JavaScript ties these technologies together, enabling interactive features such as message sending, receiving, and real-time updates.

Firebase plays a crucial role in the backend, providing a comprehensive suite of services that support the application's functionality. Firebase Authentication manages user sign-ins securely, allowing users to log in using their Google IDs. Firebase Firestore, a NoSQL cloud database, stores chat data and ensures it is synchronized across all clients in real-time. This seamless integration between the front end and backend enables the application to handle multiple users and chat rooms concurrently without compromising performance.

Overall, the web chat application demonstrates the effective use of HTML, CSS, JavaScript, React, and Firebase to create a modern, efficient, and user-friendly communication tool. Its real-time capabilities, robust backend services, and responsive UI make it a valuable solution for users seeking an engaging and reliable chat platform. The project showcases the potential of combining these technologies to build scalable web applications that can meet the demands of contemporary users.

The Conclusion:-

Creating this chat application using HTML, CSS, JavaScript, and Firebase has been a rewarding and insightful project, showcasing the potential of modern web technologies in building interactive and real-time communication platforms. The application successfully enables users to log in with their Google accounts and participate in chat rooms, providing a seamless and user-friendly experience.

One of the primary achievements of this project is the integration of Firebase for both authentication and data storage. Utilizing Firebase Authentication to manage user logins ensures a secure and efficient method for users to access the chat application. The choice of Google Sign-In not only simplifies the login process but also enhances security by leveraging Google's robust authentication system. This integration highlights the importance of using reliable third-party services to handle critical functions like authentication, allowing developers to focus on other essential aspects of the application.

The implementation of chat rooms is another significant feature that adds to the application's value. Chat rooms provide users with dedicated spaces for group discussions, fostering a sense of community and collaboration. The real-time capabilities of Firebase Firestore ensure that messages are instantly reflected across all users in a chat room, maintaining the flow of conversation without delays. This aspect of real-time interaction is crucial for a chat application and demonstrates the effectiveness of Firebase Firestore in handling real-time data synchronization.

From a design perspective, using HTML and CSS enabled the creation of a clean and intuitive user interface. Emphasizing simplicity and ease of use, the interface allows users to navigate the application effortlessly. The responsive design ensures that the application is accessible on various devices, providing a consistent experience across desktops, tablets, and smartphones. This attention to detail in the user interface design enhances the overall user experience, making the application more appealing and accessible.

However, there are several areas for potential future enhancements. While the current application meets its primary objectives, introducing additional features such as video calling, location sharing, and rich media support could significantly enhance user interaction and engagement. Security enhancements, including end-to-end encryption and two-factor authentication, would further protect user data and privacy. Additionally, expanding the application to support cross-platform functionality could attract a broader user base and improve accessibility.

Throughout this project, the challenges encountered and the solutions implemented have provided valuable learning experiences. Handling real-time data synchronization, managing user authentication, and ensuring a responsive and user-friendly design have all contributed to a deeper understanding of web development and the practical application of Firebase services. This project underscores the importance of planning, testing, and iterative development in creating a functional and reliable web application.

Report on

CROP RECOMMENDATION SYSTEM USING MACHINE LEARNING

Submitted by

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08/07/2024

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INTERNAL EXAMINER

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ABSTRACT

Agriculture stands as the cornerstone of India's economy and employment landscape, yet Indian farmers grapple with a significant challenge: the lack of optimal crop selection for their soil. This deficiency results in reduced productivity and economic strain, exacerbating food shortages and contributing to a distressing increase in farmer suicides. Addressing this issue requires recommending suitable crops based on soil characteristics. Modern agricultural practices stress the analysis of soil nutrients like potassium, nitrogen, and phosphorus to mitigate deficiencies and enhance crop growth. Additionally, diversifying crop varieties through experimentation is crucial for sustainable farming. To empower farmers with informed decisions, a project has been initiated to explore various predictive models, including Navies Bayes, Random Forest Classifier, State Vector Machine, Decision Tree, Bagging, Gradient Boosting, AdaBoost, Logistic Regression, K Nearest Neighbors, and Extra Tree. These models boast an impressive accuracy of 98% in determining the most effective approach for crop prediction based on soil attributes. By leveraging advanced technologies and data analytics, this endeavor aims to revolutionize farming practices, enabling farmers to make informed choices regarding crop selection and ultimately improving agricultural productivity and livelihoods. By integrating predictive modeling with soil analysis, Indian farmers can optimize their yields, mitigate economic hardships, and contribute to a more sustainable and resilient agricultural sector.

CONCLUSION

The project revolutionized agriculture through the implementation of machine-learning algorithms for crop recommendations. By considering factors like soil type, climate, and crop history, our solution provides personalized guidance to farmers, enhancing crop selection and yield. Leveraging algorithms such as decision trees, random forests, and neural networks, created a robust predictive model that evolve with continuous learning and user feedback. This adaptability ensures farmers access to up-to-date recommendations throughout the growing season, fostering informed decision-making. The intuitive app interface offers personalized suggestions, detailed analytics, timely alerts, and offline functionality for accessibility in remote areas. By aligning crop selection with local and market needs, promoting efficiency and sustainability, and minimizing environmental impact the comprehensive approach combines machine learning, data analysis, and mobile web development to empower farmers and drive agricultural advancement. The remain dedicated to advancing agricultural technology, fostering stable production, and ensuring food security for future generations.

INSURANCE COST PREDICTION

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The rising complexity and cost associated with insurance claims have led to a growing need for accurate insurance cost predictions. This projects aims to develop a robust machine learning model to predict insurance costs based on a variety of factors, including demographics information, medical history, lifestyle choices, and other relvent variables. utilizing a comprehensive dataset, the project applies data preprocessing technigues, exploratory data analysis(EDA), and feature engineering to prepare the data for modeling.

Several machine learning algorithm are explored, including linear regression, decision tree, and gradient boosting machine, to identify the most effective model for predicting insurance costs. The models are evaluated using standard metrics such as Mean absolute error (MAE), Mean squared Error (MSE), and R-squared to determine their accuracy and reaiability.

The projects also emphasizes the importance of model interpretability, using techniques like SHAP(shapley additive explanation) values to understand the impact of difference featues on the prediction outcomes. This interpretability is crucial for gaining insights into the key drivers of insurance costs, which can inform pllicy adjusting and strategic decision-making.

ultimately, this project aims to provide a powerful tool for insurance companies to better estimate costs, optimize pricing strategies, and enhance customer satisfaction through more personalized and fair pricing. By leveraging advanced data science techniques, the project demonstrates significant potential for imporving the efficiency and accuracy of insurance cost predictions.

The implementation of this insurance cost prediction model demonstrates the feasibility and efficacy of using machine learning techniques to address the complexities of insurance pricing. The model developed offer high accuracy in predicting costs, with gradient boosting machines outperforming other algorithms in terms of predictive power. The interpretability analysis provided valuable insights into the primary factors influencing insurace costs, highlighting the importance of variables such as age, BMI, and smoking status.

The project sucessfully illustrates how dat-driven approaches can enhance the decision-making process within the insurance industry, leading to more accurate and fair pricing strategies. additionally, the tools and methodologies developed in this project can be extended to other areas of risk assessment and cost prediction, offering broader applications across various sectors. Future works may include the incorporation of more diverse data sources and the exploration of real-time data integration to further refine and enhance the predictive capabilities of the model.

6.CONCLUSION

The development and implementation of the Global Care Foundation website represent a significant milestone in leveraging technology to support humanitarian efforts and community engagement. Throughout this project, meticulous planning, thoughtful design, rigorous testing, and careful implementation have been pivotal in creating a platform that effectively serves the Foundation's mission and goals.

Achievement of Objectives

The primary objective of this project was to create a user-centric and robust website that facilitates seamless interaction and engagement between the Global Care Foundation, its beneficiaries, volunteers, and donors. By meticulously defining and analyzing requirements through comprehensive stakeholder engagement and needs assessment, we ensured that the website meets the diverse needs of its users.

Key Features and Functionalities

The website boasts a range of essential features tailored to enhance user experience and operational efficiency. These include:

- **User Registration and Management:** Enabling individuals to register as volunteers, donors, or beneficiaries, thus fostering a supportive community.
- **Donation Management:** Streamlining the process of receiving and acknowledging donations, ensuring transparency and accountability.
- **Event Management:** Facilitating the organization and promotion of events, encouraging community participation and support.
- **Content Management:** Providing a platform for sharing stories, news updates, and educational resources, thereby amplifying the Foundation's impact and outreach.
- **Responsive Design:** Ensuring accessibility across various devices, enhancing user engagement and accessibility.

System Testing and Deployment

Thorough system testing was conducted to validate the functionality, security, and performance of the website before deployment. This included rigorous testing of user flows,

31

NGO WEBSITE DESIGN

A MAIN PROJECT REPORT

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in partial fulfillment for the award of the degree of

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01/07/2024

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

This project aims to develop a user-friendly, responsive website for an NGO to enhance its online presence, engage stakeholders, and promote transparency. Keyfeatures include a donation platform, volunteer management system, event calendar, multimedia integration, and social media links. The design will focus on user-centered principles, accessibility, and SEO optimization.

Objectives:

- **Enhance Online Presence**: Create an attractive and accessible website.
- **Facilitate Engagement**: Implement features for interaction with supporters, volunteers, and donors.
- **Promote Transparency**: Provide clear information about the NGO's mission and activities.

Implementation Plan:

1. **Requirement Gathering**: Understand the NGO's needs and goals.
2. **Design and Prototyping**: Create wireframes and prototypes.
3. **Development**: Build the website using modern technologies.
4. **Testing**: Ensure usability, functionality, and performance.
5. **Launch and Maintenance**: Deploy the website and provide ongoing support.

Expected Outcomes:

- Professional online presence.
- Increased donor and volunteer engagement.
- Enhanced transparency and credibility.

6.CONCLUSION

The development and implementation of the Global Care Foundation website represent a significant milestone in leveraging technology to support humanitarian efforts and community engagement. Throughout this project, meticulous planning, thoughtful design, rigorous testing, and careful implementation have been pivotal in creating a platform that effectively serves the Foundation's mission and goals.

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System Testing and Deployment

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Face recognition based attendance system

MAIN PROJECT REPORT
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INTERNAL EXAMINER

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ABSTRACT

Face recognition attendance systems revolutionize traditional attendance tracking methods by employing advanced facial recognition technology to automatically identify and record employee or student attendance. This innovative system utilizes biometric principles to scan and analyze facial features such as the distance between eyes, nose, and mouth to verify individual identities. By eliminating the need for physical badges or fingerprint scanners, face recognition attendance systems offer increased accuracy, efficiency, and security. Additionally, they streamline administrative processes, reduce errors associated with manual data entry, and provide real-time attendance data, making them indispensable tools for modern organizations and educational institutions aiming to enhance operational effectiveness and accountability.

8.CONCLUSION

The development of a face recognition-based attendance system using Python represents a significant advancement in attendance management technology. By integrating Python's powerful libraries with machine learning algorithms, such systems can efficiently and accurately identify individuals, thereby streamlining the attendance process. The use of Python also ensures that the system is flexible and scalable, allowing for future enhancements and integration with other systems.

These systems typically employ libraries like OpenCV for image processing and face recognition, along with machine learning libraries to train models that can recognize and verify faces with high accuracy. They are capable of handling variations in lighting, facial expressions, and even minor changes in appearance, making them reliable for daily use.

Moreover, the implementation of such systems can lead to a reduction in fraudulent attendance practices, increased accountability, and significant time savings over traditional methods. However, it is crucial to address privacy concerns and ensure the security of the biometric data collected by these systems.

In conclusion, face recognition-based attendance systems using Python are a testament to the potential of artificial intelligence in enhancing operational efficiency and security in various organizational settings. As technology continues to evolve, these systems are expected to become even more robust and widely adopted.

E-COMMERCE WEBSITE

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INTERNAL EXAMINER.

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ABSTRACT

This project focuses on the development of a user-friendly e-commerce website designed to enhance the online shopping experience. The website integrates essential features such as a robust search function, product categorization, secure payment gateways, and a personalized recommendation system. Using a responsive design, it ensures accessibility across various devices, providing a seamless experience for users on desktops, tablets, and smartphones. The project employs modern web development technologies including HTML5, CSS3, JavaScript, and a backend powered by a combination of PHP and MySQL for efficient data management. Security measures such as SSL encryption and user authentication are implemented to protect user data and transactions. The site also features an intuitive administrative dashboard that allows for easy management of products, orders, and customer inquiries. Throughout the development process, user feedback was continuously gathered to refine and optimize the website's functionality and design. The final product aims to not only meet current market standards but also to set a benchmark in terms of usability, security, and performance for small to medium-sized e-commerce businesses.

6. CONCLUSION

In conclusion, the development and implementation of the e-commerce clothing website represent a significant achievement in leveraging technology to enhance the shopping experience for our customers. Throughout the project lifecycle, from initial conception to final implementation, several key milestones and challenges were addressed, highlighting the dedication and expertise of our team.

The website aims to provide a seamless and intuitive platform for users to browse, select, and purchase a wide range of clothing products. By incorporating robust backend systems utilizing Java Servlets, SQL databases, and frontend technologies like HTML, CSS, and JavaScript, we have ensured a responsive and user-friendly interface. This technological foundation not only supports efficient inventory management and secure transactions but also enhances the overall shopping experience.

Systematic testing phases, including unit testing, integration testing, and comprehensive system testing, were instrumental in ensuring the website's functionality, performance, and security. Continuous monitoring and proactive maintenance strategies are now in place to uphold these standards post-implementation. This includes regular updates, security enhancements, and responsive customer support to address any issues promptly.

In essence, the success of this project underscores our commitment to delivering a reliable, secure, and innovative online shopping experience. We extend our gratitude to all team members, and partners whose contributions made this endeavor possible. Together, we look forward to continued success and evolution in the dynamic landscape of e-commerce.

E-COMMERCE WEBSITE

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In essence, the success of this project underscores our commitment to delivering a reliable, secure, and innovative online shopping experience. We extend our gratitude to all team members, and partners whose contributions made this endeavor possible. Together, we look forward to continued success and evolution in the dynamic landscape of e-commerce.

E-COMMERCE WEBSITE

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Certified that this project report **"E-COMMERCE WEBSITE"** is the bonafide work of **"MANU N, (U18AJ21S0049)"** who carried out the project work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

This project focuses on the development of a user-friendly e-commerce website designed to enhance the online shopping experience. The website integrates essential features such as a robust search function, product categorization, secure payment gateways, and a personalized recommendation system. Using a responsive design, it ensures accessibility across various devices, providing a seamless experience for users on desktops, tablets, and smartphones. The project employs modern web development technologies including HTML5, CSS3, JavaScript, and a backend powered by a combination of PHP and MySQL for efficient data management. Security measures such as SSL encryption and user authentication are implemented to protect user data and transactions. The site also features an intuitive administrative dashboard that allows for easy management of products, orders, and customer inquiries. Throughout the development process, user feedback was continuously gathered to refine and optimize the website's functionality and design. The final product aims to not only meet current market standards but also to set a benchmark in terms of usability, security, and performance for small to medium-sized e-commerce businesses.

6. <u>CONCLUSION</u>

In conclusion, the development and implementation of the e-commerce clothing website represent a significant achievement in leveraging technology to enhance the shopping experience for our customers. Throughout the project lifecycle, from initial conception to final implementation, several key milestones and challenges were addressed, highlighting the dedication and expertise of our team.

The website aims to provide a seamless and intuitive platform for users to browse, select, and purchase a wide range of clothing products. By incorporating robust backend systems utilizing Java Servlets, SQL databases, and frontend technologies like HTML, CSS, and JavaScript, we have ensured a responsive and user-friendly interface. This technological foundation not only supports efficient inventory management and secure transactions but also enhances the overall shopping experience.

Systematic testing phases, including unit testing, integration testing, and comprehensive system testing, were instrumental in ensuring the website's functionality, performance, and security. Continuous monitoring and proactive maintenance strategies are now in place to uphold these standards post-implementation. This includes regular updates, security enhancements, and responsive customer support to address any issues promptly.

In essence, the success of this project underscores our commitment to delivering a reliable, secure, and innovative online shopping experience. We extend our gratitude to all team members, and partners whose contributions made this endeavor possible. Together, we look forward to continued success and evolution in the dynamic landscape of e-commerce.

BOOK RECOMMENDATION SYSTEM

A MAIN PROJECT REPORT

Submitted by

ANUPAM SANKAR
(U18AJ21S0086)

in partial fulfillment for the award of the degree of

BACHELOR OF COMPUTER APPLICATION

Under the guidance of

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INTERNAL EXAMINER.

EXTERNAL EXAMINER.

2

ABSTRACT

The increasing amount of available literature presents a challenge in finding
books that align with readers' preferences. The purpose of this project is to
develop a book recommendation system using Python, aimed at assisting
users in discovering books that align with their interests. Leveraging
collaborative filtering and content-based filtering techniques, this system
provides personalized book suggestions based on user preferences and
reading history.

The project was implemented in Google Colab, utilizing various Python
libraries including Pandas, NumPy, and Scikit-learn. Data for the
recommendation system was sourced from publicly available book datasets,
which were preprocessed to create user-item matrices and feature vectors for
books. The collaborative filtering approach was chosen for its effectiveness
in handling sparse data and its ability to provide accurate recommendations
by analyzing user behavior patterns

Through extensive testing and evaluation, the recommendation system
demonstrated a high level of accuracy and efficiency in predicting user
preferences. This project not only showcases the application of machine
learning algorithms in real-world scenarios but also highlights the potential
for enhancing user experiences through personalized recommendations. The
results demonstrate the system's capability to provide relevant and accurate
book recommendations, showcasing its potential as a valuable tool for
readers.

CONCLUSION

The development of the book recommendation system aimed to create a robust and efficient tool for recommending books to users based on their preferences and behaviors. This project utilized Python and various data science libraries, implemented in Google Colab, to achieve this goal. The process involved several critical steps, including data preparation, data visualization, the implementation of collaborative filtering algorithms, and the evaluation of the recommendation system's performance.

KEY FINDINGS

1. Data Preparation and Feature Engineering: The initial phase of data preparation, including data cleaning and feature engineering, was crucial in ensuring the quality and usability of the dataset. By handling missing values, removing duplicates, and transforming raw data into meaningful features, we set a strong foundation for the subsequent analysis and modeling.

2. Data Visualization: Visualizing the data helped in understanding the distribution and relationships within the dataset. Techniques such as histograms, scatter plots, heatmaps, and box plots provided valuable insights that informed the design and implementation of the recommendation algorithms.

3. Recommendation System: The core of the project involved developing a memory-based collaborative filtering algorithm. By creating user-item matrices and utilizing cosine similarity, the system was able to generate personalized book recommendations. The use of collaborative filtering leveraged the power of user interactions to provide relevant suggestions.

4. Evaluation of Performance: The recommendation system was evaluated using precision, recall, and F1-score metrics. These metrics provided a comprehensive assessment of the system's accuracy and effectiveness in making relevant recommendations. The results demonstrated that the system could successfully identify and suggest books that matched user preferences.

CHALLENGES AND SOLUTIONS

Throughout the project, several challenges were encountered, including handling sparse data in the user-item matrices and ensuring the scalability of the recommendation algorithm. These challenges were addressed by:

E-COMMERCE ANALYSIS

A MAIN PROJECT REPORT

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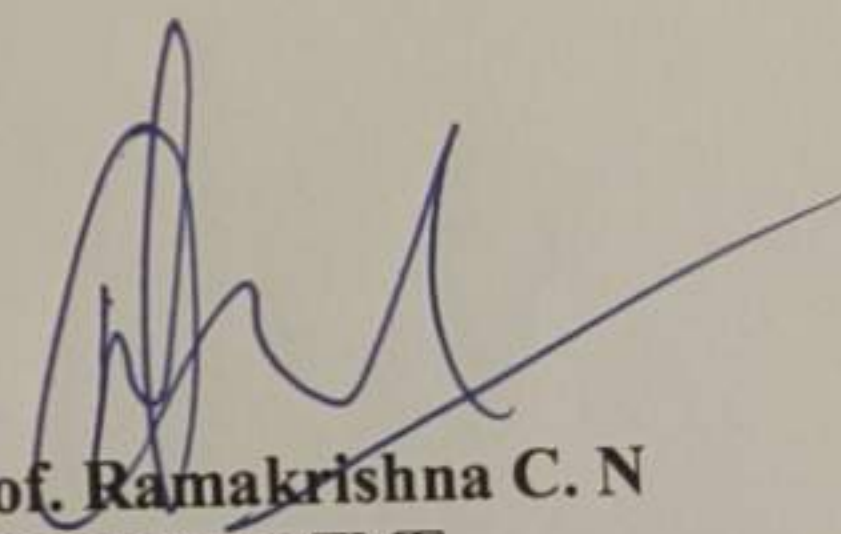
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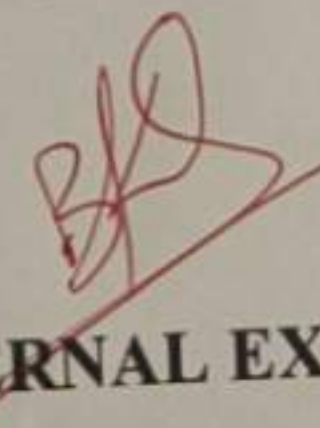
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EXTERNAL EXAMINER

INTERNAL EXAMINER

ABSTRACT

In our daily life we are facing so many security issues in every aspect. By using updated technology, we have to resolve these issues. In this project, implemented a face recognition module for security purposes. By using face recognition, it will capture pictures of a person by utilizing the camera and that image is saved in the database of that. The picture is useful for unlocking the door. Lock on the door will be released when the person will stand ahead of the camera, the camera will verify the person's face if it matches the image already stored in the database then only the door will be unlocked.

If the system cannot recognize the face, then that time the system will generate message to the user. Face recognition is one of the most Secured Systems in biometric verification. At this time, going to implement a new technological environment, by seeing the worldwide basis, can see the increasing count of theft and fraud are significantly going on day by day in recent years. So, in this project, implemented new technology and develop the Face recognition Door Lock System using Raspberry pi. Raspberry Pi is smaller and lighter and it uses less power than a computer or a standard-PC for face recognition. So, project can be implemented with the Raspberry Pi module. Raspberry pi is a secured system once data given, cannot modify that data. It is more secure so used in this project.

This project is not only used for home hold purposes, it's also used for banks, Hospitals, MNC companies, military purposes and taking attendance for students and faculty in colleges. By using this system, we can decrease the security issues in our daily life because it is the most securable system to get rid of thieves and frauds or other people around our society.

6. CONCLUSION

In conclusion, a facial detection door lock system utilizing a Raspberry Pi camera represents a modern and secure approach to access control. This system leverages advanced technology to enhance convenience and safety in residential and commercial settings. By integrating facial detection and recognition capabilities, the system ensures reliable authentication of individuals, mitigating the risks associated with traditional key-based access methods.

Key benefits of this system include:

1. **Enhanced Security:** Facial recognition provides a robust layer of security by accurately identifying authorized individuals based on unique facial features.
2. **Convenience:** Users benefit from a seamless and hands-free entry experience, eliminating the need for physical keys or access cards.
3. **Scalability:** The system can be adapted for various environments and scales, accommodating different user bases and access requirements.
4. **Integration Capabilities:** It integrates smoothly with existing door lock mechanisms and can be augmented with additional features like remote access control.
5. **Privacy Considerations:** Implementing privacy measures such as data encryption and secure storage ensures the protection of users' facial data.

However, successful implementation and operation of such a system require thorough testing, regular maintenance, and adherence to security best practices. Continuous monitoring and updates are essential to address emerging threats and maintain optimal performance over time.

In essence, a facial detection door lock system using a Raspberry Pi camera not only enhances security but also embraces innovation to redefine access control in today's digital age. Its effectiveness lies in its ability to combine cutting-edge technology with practical usability, offering a reliable solution for modern security challenges.

ONLINE MOVIE TICKET BOOKING USING PYTHON

A MAIN PROJECT REPORT

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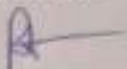1#89/90, Soldevanahalli, Hesaraghatta Road, Bengaluru – 560107

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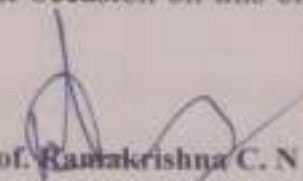
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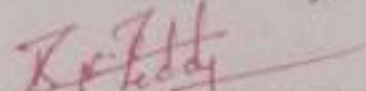
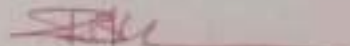Acharya Institute of Graduate Studies

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INTERNAL EXAMINER   EXTERNAL EXAMINER

ABSTRACT

Introduction :
Online movie ticket booking systems have revolutionized the way audiences purchase tickets, making it more convenient and accessible for moviegoers to secure their seats from the comfort of their homes. With the advent of digital technology, traditional box office sales have been complemented and, in many cases, replaced by sophisticated online platforms. These platforms enable users to browse movie schedules, choose preferred seats, and make payments seamlessly. Leveraging Python for developing such a system offers a robust, scalable, and easy-to-maintain solution due to Python's versatile libraries and frameworks.

Existing Solutions and Their Drawbacks
Currently, several online movie ticket booking systems are available, including well-known platforms like Fandango, BookMyShow, and AMC Theatres' own online services. While these platforms provide essential functionalities, they often come with notable drawbacks. Users frequently encounter issues such as high convenience fees, limited payment options, poor user interface design, and inadequate customer support. Additionally, many of these systems lack personalization features and advanced security measures to protect user data. The reliance on third-party integrations for payment and booking processes can also lead to inefficiencies and increased costs.

Proposed Solution and Advantages
The proposed solution is an online movie ticket booking system developed using Python, focusing on overcoming the limitations of existing platforms. This system aims to offer a user-friendly interface, enhanced security, and a seamless booking experience. By utilizing Python's Django framework, the solution will ensure efficient backend management and rapid development. Key advantages include reduced transaction fees, integration of multiple secure payment gateways, and personalized user recommendations based on viewing history. Furthermore, the system will incorporate advanced security protocols to protect user data and provide 24/7 customer support through automated chatbots powered by machine learning algorithms. This holistic approach aims to deliver a superior, cost-effective, and secure ticket booking experience.

CONCLUSION

- **Purpose:** This document outlines the procedures and best practices for maintaining an online movie ticket booking system developed using Python.
- **Scope:** It covers regular maintenance tasks, troubleshooting common issues, and ensuring system security and performance.

- **Description:** The online movie ticket booking system allows users to view movie schedules, select seats, and purchase tickets online.
- **Technologies Used:** Python, Flask/Django (web framework), SQL/NoSQL (database), HTML/CSS/JavaScript (front-end), and third-party APIs for payment processing.

  - **Backup and Recovery:** Regular backups of the database should be scheduled to prevent data loss. Use tools like pg_dump for PostgreSQL or mysqldump for MySQL.

```python
python
Copy code
import subprocess
def backup_database():
    subprocess.run(["pg_dump", "dbname", "-U", "username",
"-f", "backup.sql"])
```

  - **Optimization:** Periodic optimization of database tables (e.g., reindexing, vacuuming) to ensure efficient query performance.
  - **Monitoring:** Use tools like pgAdmin or phpMyAdmin for monitoring database health.

Application Server Maintenance

  - **Code Updates:** Regularly update the application codebase to include security patches, bug fixes, and new features.

```python
python
Copy code
import os
def update_codebase():
    os.system("git pull origin main")
```

  - **Dependency Management:** Use pip to manage Python package dependencies. Regularly update packages to their latest stable versions.

```python
python
```

FACIAL DETECTION DOOR LOCK SYSTEM USING PI CAMERA

A MAIN PROJECT REPORT

Submitted by

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AKSHAY C (U18AJ21S0076)
VIVEK R (U18AJ21S0008)

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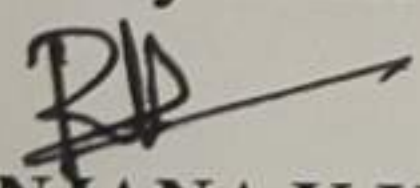2023-2024

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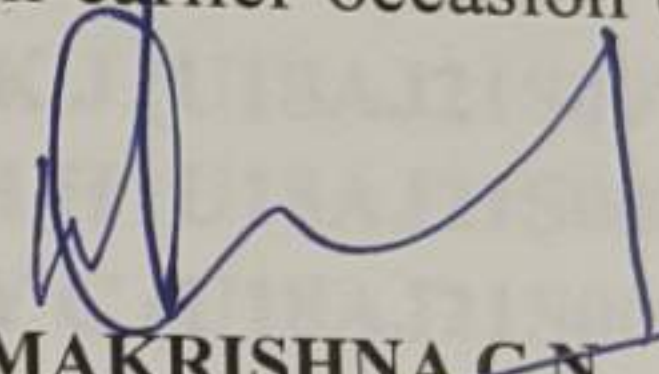
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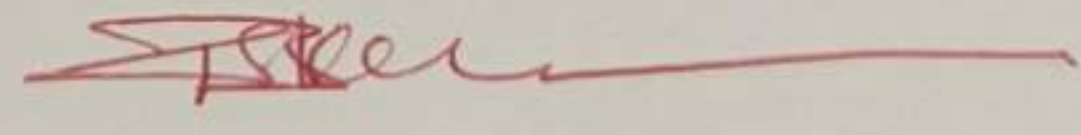
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INTERNAL EXAMINER

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  ```python
  ```

WALMART SALES ANALYSIS

A MAIN PROJECT REPORT

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INTERNAL EXAMINER

EXTERNAL EXAMINER

The Walmart Sales Analysis project has provided significant insights into the company's sales performance, customer behaviour, and operational efficiencies. Through comprehensive data analysis and the application of advanced analytics, we have achieved the following key outcomes:

- Enhanced Understanding of Sales Trends

- Informed Decision-Making

- Operational Efficiency Improvements

- Customer-Centric Strategies

- Scalable and Robust Data Infrastructure

The Walmart Sales Analysis project has laid a strong foundation for data-driven decision-making and operational excellence. By continuing to invest in advanced analytics and technology, Walmart can maintain its competitive edge, drive business growth, and consistently meet customer expectations. The insights gained from this project not only enhance current operations but also pave the way for innovative strategies and future success.

HOSPITAL MANAGEMENT SYSTEM

A MAIN PROJECT REPORT

Submitted by

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Tejesh N (U18AJ21S0101)

Janardhan Rokaya J (U18AJ21S0042)

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INTERNAL EXAMINER   **EXTERNAL EXAMINER**

ABSTRACT

The Hospital Management System (HMS) is a comprehensive software application designed to manage the operations of a healthcare facility. Developed using Java for the backend, with CSS and JavaScript for the frontend, this system aims to streamline administrative tasks, enhance patient care, and improve overall efficiency.

The HMS encompasses several key modules, including patient registration, appointment scheduling, medical records management, billing, and inventory management. The patient registration module facilitates the collection and storage of patient information, ensuring quick and easy access for healthcare providers. Appointment scheduling allows patients to book, reschedule, or cancel appointments with ease, while also providing doctors with a clear overview of their daily schedules.

The medical records management module maintains detailed and secure electronic health records (EHRs), allowing for real-time updates and seamless sharing of patient information among authorized personnel. The billing module automates the invoicing process, ensuring accuracy and timeliness in financial transactions. Inventory management keeps track of medical supplies and equipment, preventing shortages and ensuring the availability of essential items.

The system's user interface, crafted with CSS and JavaScript, is designed for ease of use, offering an intuitive and responsive experience for both staff and patients. Security measures, including encryption and role-based access controls, are implemented to safeguard sensitive information.

Overall, the Hospital Management System enhances operational efficiency, reduces administrative burdens, and improves patient care through effective management and seamless integration of hospital processes.

7. CONCLUSION

The hospital management system developed using Java for backend processes, and HTML, CSS, and JavaScript for the frontend interface, offers a comprehensive solution for streamlining hospital operations. This system efficiently manages patient records, appointments, billing, and staff information, enhancing the overall productivity and accuracy of administrative tasks. By integrating a user-friendly interface with robust backend support, it ensures secure data handling and real-time access to vital information, ultimately improving patient care and operational efficiency within the healthcare facility.

Benefits:

The development and implementation of a hospital management system using Java, CSS, JavaScript, and HTML represent a significant advancement in healthcare administration and patient care. This robust system integrates various functions, including patient registration, appointment scheduling, medical records management, billing, and staff coordination, into a cohesive platform that enhances operational efficiency and accuracy. By leveraging Java's powerful backend capabilities, the system ensures reliable data processing and security, while CSS and HTML provide a user-friendly and visually appealing interface. JavaScript adds dynamic interactions, improving user experience and engagement. This comprehensive solution not only streamlines administrative tasks but also facilitates better resource allocation and decision-making by providing real-time data and analytics. The system's ability to handle large volumes of data with precision reduces errors and redundancies, thus enhancing overall healthcare quality and patient satisfaction. Moreover, the implementation of web technologies ensures accessibility and scalability, allowing the system to be deployed across various devices and locations, thereby extending its benefits to a broader range of users. In essence, this hospital management system epitomizes the convergence of

modern technology and healthcare, paving the way for more efficient, effective, and patient-centric medical services. By addressing the critical needs of healthcare providers and patients alike, this system stands as a testament to the transformative power of technology in improving health outcomes and operational workflows in the medical field.

E-Commerce Goods Shipment Analysis

A MAIN PROJECT REPORT

Submitted by

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NEHA KUMARI SAH (U18AJ21S0370)

ANIMESH KUMAR (U18AJ21S0102)

A report submitted in partial fulfillment of the requirements for the Award of Degree of

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INTRODUCTION

The e-commerce industry has experienced exponential growth over the past decade, fundamentally transforming the retail landscape. This surge in online shopping has intensified competition among e-commerce platforms, pushing companies to differentiate themselves through various means. One of the most critical factors influencing customer satisfaction and retention is the timely delivery of purchased goods. As delivery speed becomes a key competitive advantage, e-commerce businesses must ensure efficient and accurate shipping processes to meet customer expectations.

Timely delivery not only enhances customer satisfaction but also fosters brand loyalty and repeat purchases. Conversely, delays in shipping can lead to customer dissatisfaction, negative reviews, and loss of business. Therefore, accurately predicting shipping durations and identifying potential late deliveries are vital components of a robust e-commerce logistics strategy.

This project aims to address these challenges by leveraging machine learning techniques to predict shipping durations and assess the risk of late deliveries. We will develop a comprehensive model with two main components: a Multi-Output Decision Tree Regressor and a Binary Classifier.

The Multi-Output Decision Tree Regressor will be used to predict the shipping duration for multiple stages of the delivery process. By analyzing historical shipping data, the regressor will learn patterns and factors influencing delivery times, enabling it to make accurate predictions for future shipments. This capability will allow e-commerce businesses to provide more reliable delivery estimates to their customers, thereby enhancing their shopping experience.

In addition to predicting shipping durations, it is crucial to identify orders that are at high risk of being delivered late. For this purpose, we will develop a Binary Classifier that will analyze various features of the orders and classify them as either "on-time" or "late." By integrating this classifier into the logistics workflow, e-commerce platforms can proactively manage at-risk orders, take corrective actions, and communicate effectively with customers about potential delays.

To build these models, we will utilize a rich dataset encompassing various attributes such as order details, customer information, shipping methods, carrier performance, and historical delivery times. Feature engineering will play a pivotal role in extracting relevant information and enhancing the predictive power of the models. Techniques such as data normalization, handling missing values, and encoding categorical variables will be employed to preprocess the data.

The project will be implemented using Python, leveraging libraries such as scikit-learn for machine learning algorithms, pandas for data manipulation, and matplotlib and seaborn for data visualization. The models' performance will be evaluated using metrics such as mean absolute error (MAE) for the regressor and accuracy, precision, recall, and F1-score for the classifier. Cross-validation and hyperparameter tuning will be performed to optimize the models and ensure their generalizability to unseen data.

In summary, this project seeks to harness the power of machine learning to enhance the efficiency and reliability of e-commerce shipping processes. By accurately predicting shipping durations and identifying high-risk orders, e-commerce businesses can improve customer satisfaction, optimize their logistics operations, and maintain a competitive edge in the dynamic online retail market.

CONCLUSION

In conclusion, the project "E-Commerce Goods Shipment Duration Prediction and Estimating Late Delivery Risk" has successfully developed a sophisticated system that addresses critical challenges in the logistics domain of the e-commerce industry. By employing advanced machine learning techniques, the project created a Multi-Output Decision Tree Regressor to accurately predict both the fastest and normal shipping durations for inland and international shipments. Additionally, a robust Binary Classifier was designed to assess the risk of late deliveries, enabling proactive management of potential delays. These models were meticulously trained and validated using comprehensive data preprocessing and feature engineering techniques, ensuring high accuracy and reliability in their predictions.

The successful integration of these models into a user-friendly web-based application has been a pivotal achievement of this project. The application provides real-time predictions and risk assessments, complete with detailed visualizations and insights, thereby enhancing accessibility and usability for stakeholders. This integration not only streamlines the decision-making process for logistics managers but also contributes to improved operational efficiency by optimizing delivery schedules and minimizing the impact of delays. The ability to deliver accurate shipping time estimates and identify high-risk orders enhances customer satisfaction, fostering trust and loyalty in a competitive e-commerce market.

The impact of this project extends beyond immediate operational benefits. By leveraging data-driven insights, the system empowers e-commerce companies to make informed decisions, strategically allocate resources, and continuously improve their logistics processes. The scalability and performance of the system ensure that it can handle increasing volumes of data and user requests, making it a sustainable solution for future growth. Moreover, the project's comprehensive approach to data analysis, model development, and system integration sets a precedent for future innovations in logistics management.

Looking ahead, there are several avenues for further enhancement and expansion of the system. Continuously retraining the models with new data will help maintain and improve prediction accuracy, while exploring advanced machine learning techniques could further enhance performance. Incorporating additional data sources, such as real-time traffic data and economic indicators, can provide more comprehensive insights and improve the robustness of predictions. Refining the user interface based on feedback and adding new features, such as personalized recommendations and real-time notifications, will enhance user experience and engagement.

In summary, the project "E-Commerce Goods Shipment Duration Prediction and Estimating Late Delivery Risk" has achieved significant milestones in improving logistics management through advanced predictive modeling and risk assessment. The system's ability to deliver accurate shipping duration predictions and identify high-risk deliveries not only enhances operational efficiency but also boosts customer satisfaction. With ongoing improvements and expansions, this system has the potential to set new standards for logistics management in the e-commerce industry, driving innovation and excellence in a rapidly evolving market.

AI CHATBOT INTEGRATED WITH E-LEARNING PLATFORM

A MAIN PROJECT REPORT

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ABSTRACT

In the realm of modern education technology, the integration of artificial intelligence (AI) chatbots with e-learning platforms has emerged as a promising innovation. This abstract explores the development and implementation of an AI chatbot integrated with an e-learning platform, leveraging Dialogflow and a chatbot framework with Python as its backend.

The primary objective of this integration is to enhance the user experience and learning outcomes for students and educators alike. By utilizing AI-driven chatbots, the system aims to provide personalized learning experiences, instant feedback, and 24/7 support to users.

Methodology: The implementation involves several key components:

Dialogflow Integration: Dialogflow, a natural language understanding platform from Google Cloud, is used to build and train the AI chatbot. It enables the chatbot to comprehend and respond to user queries in natural language, enhancing the interaction between users and the e-learning platform.

Chatbot Framework: A customizable chatbot framework in Python serves as the backend for handling and processing user requests. This framework includes functionalities such as user authentication, data retrieval from the e-learning platform's databases, and integration with external APIs for additional content.

Backend Development: Python is chosen as the backend programming language due to its versatility and robust ecosystem for web development. Python libraries and frameworks are utilized to create APIs, manage server-side logic, and ensure seamless communication between the e-learning platform and the chatbot.

Results: The integration of the AI chatbot with the e-learning platform demonstrates several benefits:

Enhanced User Engagement: Students can interact with the chatbot in real-time, receiving immediate responses to their queries related to course materials, assignments, and assessments.

Personalized Learning Experience: The chatbot uses AI algorithms to adapt responses based on user behavior and preferences, providing tailored recommendations and study tips.

Scalability and Accessibility: With 24/7 availability, the chatbot ensures continuous support to users, irrespective of time zones or geographical locations.

9.CONCLUSION

AI chatbots in the EdTech industry may be used to enhance teaching methods as well as to customize and engage students learning experience. Additionally, they can reduce the administrative burden of educational institutions. As a result, we may see a significant development in the education industry, positive interaction of students and teachers, and improved learning environment.

The main objectives of the project were to develop an algorithm that will be used to identify answers related to user submitted questions. To develop a database were all the related data will be stored and to develop a web interface. The web interface developed had two parts, one for simple users and one for the administrator.

A background research took place, which included an overview of the conversation procedure and any relevant chat bots available. A database was developed, which stores information about questions, answers, keywords, logs and feedback messages. A usable system was designed, developed and deployed to the web server on two occasions. An evaluation took place from data collected by potential students of the University. Also after received feedback from the first deployment, extra requirements were introduced and implemented.

In conclusion, chatbots offer a range of benefits for travel businesses. They provide 24/7 customer service and support, which can lead to increased customer satisfaction and loyalty. Chatbots also use customer data to provide personalized recommendations and offers, increasing the likelihood of bookings and revenue for travel businesses. Additionally, chatbots can streamline the booking process and reduce labor costs, resulting in significant cost savings for businesses. By implementing chatbots, travel businesses can stay ahead of the curve and provide a seamless and efficient customer experience. The potential of this technology is vast and exciting, and we encourage all businesses in the travel industry to explore the possibilities that chatbots can offer.

FACE RECOGNITION BASED ATTENDANCE SYSTEM

A MAIN PROJECT REPORT

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ABSTRACT

In colleges, universities, organizations, schools, and offices, taking attendance is one of the most important tasks that must be done on a daily basis. The majority of the time, it is done manually, such as by calling by name or by roll number. The main goal of this project is to create a Face Recognition-based attendance system that will turn this manual process into an automated one. This project meets the requirements for bringing modernization to the way attendance is handled, as well as the criteria for time management. This device is installed in the classroom, where and student's information, such as name, roll number, class, sec, and photographs, is trained. The images are extrthe start of the corresponding class, the student can approach the machine, which will begin taking pictures and comparing them to the qualified dataset. Logitech C270 web camera and NVIDIA Jetson Nano Developer kit were used in this project as the camera and processing board. The image is processed as follows: first, faces are identified using a Haarcascade classifier, then faces are recognized using the LBPH (Local Binary Pattern Histogram) Algorithm, histogram data is checked against an established dataset, and the device automatically labels attendance. An Excel sheet is developed, and it is updated every hour with the information from the respective class instructor.

Keywords: Face Detection, Face Recognition, HaarCascade classifier.

CONCLUSION

Face recognition systems are part of facial image processing applications and their significance as a research area are increasing recently. Implementations of system are crime prevention, video surveillance, person verification, and similar security activities. The face recognition system implementation can be part of Universities. Face Recognition Based Attendance System has been envisioned for the purpose of reducing the errors that occur in the traditional (manual) attendance taking system. The aim is to automate and make a system that is useful to the organization such as an institute. The efficient and accurate method of attendance in the office environment that can replace the old manual methods. This method is secure enough, reliable and available for use. Proposed algorithm is capable of detect multiple faces, and performance of system has acceptable good results.

Therefore, the purpose of this project is to capture a video of people, convert it into frames, link it to a database to ensure their presence or absence, to mark the presence of a real student to keep a record. The Automated Classroom Attendance System helps to increase accuracy and speed and ultimately achieve the highest accuracy of real-time arrival to satisfy the need for automatic classroom testing.

This system aims to build an effective class attendance system using face recognition techniques. The proposed system will be able to mark the attendance via face Id. It will detect faces via webcam and then recognize the faces. After recognition, it will mark the attendance of the recognized student and update the attendance record.

FOOD DISCOUNT EXTENSION
A MAIN PROJECT REPORT

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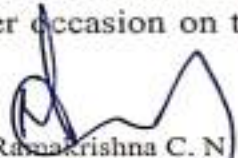1#89/90, Soldevanahalli, Hesaraghatta road, Bengaluru – 560107

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ABSTRACT

This project presents a Chrome extension designed to streamline the process of discovering and managing food discounts from various vendors such as Zomato, Swiggy, Domino's, McDonald's, Burger King, KFC, Eat Sure, and The Oven Story. The extension features a user-friendly interface that displays current food discounts and their details, including the vendor name, discount description, code, terms, and expiration date.

A standout feature of this extension is its automated reminder system, which notifies users of available discounts during peak meal times: breakfast, lunch, and dinner. This ensures that users are reminded of potential savings at the most opportune times. The extension requests notification permission from users and uses the Chrome Alarms API to schedule daily notifications. Additionally, a test notification feature allows users to verify that the reminder system is functioning correctly.

The extension leverages HTML, CSS, and JavaScript for its frontend, ensuring a visually appealing and responsive design. Key tools and technologies include the Chrome Extensions API, Google Fonts, and various web development frameworks. This project aims to enhance the user's dining experience by providing timely and relevant discount information, ultimately promoting cost savings and convenience.

By integrating these features, this Chrome extension stands out as a practical and innovative tool for users looking to maximize their savings on food orders while enjoying a seamless user experience.

8. CONCLUSION

The development and deployment of the Food Discount Extension have been an intricate yet rewarding process. This project was initiated with the objective of providing users with an easy-to-use platform to access and utilize food discount coupons efficiently. By integrating features such as automatic notifications for meal times and a user-friendly search interface, we have aimed to enhance the overall user experience.

Throughout the development cycle, significant emphasis was placed on designing an intuitive user interface, ensuring seamless integration of functionalities, and implementing robust notification systems. The testing phase played a crucial role in identifying and rectifying any issues, thus ensuring the reliability and performance of the extension.

Key highlights of the project include:
- **Comprehensive Design:** A well-structured layout and easy navigation were prioritized to ensure users can effortlessly find and apply discounts.
- **Notification System:** Automatic reminders for meal times ensure that users do not miss out on potential savings.
- **User Feedback:** Incorporation of feedback from user acceptance testing has led to enhancements that align with user expectations.

Looking ahead, there are numerous possibilities for future enhancements, such as incorporating real-time updates, personalized discount recommendations, and expanding the database of coupons. These improvements will further refine the user experience and increase the extension's utility.

In conclusion, the Food Discount Extension stands as a testament to the effective application of web technologies and user-centric design principles. It not only meets its initial objectives but also lays a strong foundation for future developments that can continue to add value for its users. Through continuous improvement and adaptation, the extension can maintain its relevance and utility in an ever-evolving digital landscape.

IOT ENABLED WATER LEVEL MEASUREMENT

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ABSTRACT

The Internet of Things (IoT) has revolutionized numerous industries by providing enhanced connectivity, data collection, and real-time monitoring capabilities. This abstract presents an overview of an IoT-enabled water level measurement system designed to address the critical need for efficient water resource management. The system integrates advanced sensor technologies, wireless communication, and data analytics to provide accurate and real-time water level monitoring in various applications such as reservoirs, rivers, lakes, groundwater wells, and storage tanks.

The core components of the IoT-enabled water level measurement system include high-precision sensors (ultrasonic, capacitive, or radar), IoT communication modules (Wi-Fi, LoRa, or cellular networks), and a centralized cloud-based monitoring platform. Sensors continuously measure water levels and transmit the data wirelessly to the cloud, where it is processed, stored, and analyzed. The cloud platform offers a user-friendly interface for real-time monitoring, data visualization, and automated alerts for predefined water level thresholds.

Key features of the system include:

- **Real-Time Monitoring**: Continuous water level measurement and instant data transmission to the cloud for real-time access.

- **Remote Accessibility**: Users can monitor water levels from anywhere using web-based dashboards or mobile applications.

- **Data Analytics**: Advanced algorithms analyze historical and real-time data to identify trends, predict future water levels, and generate actionable insights.

- **Automated Alerts**: Instant notifications for abnormal water levels or system malfunctions, enabling proactive management and timely interventions.

- **Scalability and Flexibility**: The system can be easily expanded to include additional sensors and monitoring points, making it suitable for various scales and applications.

The IoT-enabled water level measurement system enhances water management efficiency by providing accurate, real-time data and predictive insights, thereby supporting sustainable water usage, flood prevention, and resource optimization. The integration of IoT technology not only improves the reliability and effectiveness of water level monitoring but also reduces operational costs and manual intervention

CONCLUSION

In this project, we successfully designed an IoT water level monitoring system using an ESP32 microcontroller, an ultrasonic sensor (HC-SR04), and an LED display. The system provides real-time water level measurements, alerts for low water levels, and visual feedback through the LED display.

By combining these components, we've created an efficient and cost-effective solution for water management and flood prevention.

Creating your own smart home has never been easier. With this ESP32 IoT project, you can transform your ordinary appliances into smart devices that can be controlled effortlessly. Say goodbye to the hassle of manually operating your devices and embrace the power of automation. What are you waiting for? Start building your dream smart home today.

Building an IoT-based water level monitoring system allows you to remotely monitor the water level and receive notifications when it drops below a certain threshold. Through the combination of ESP32, Blynk, and an ultrasonic sensor, you can ensure efficient water management and prevent potential issues. For more exciting technology articles and projects.

LIGHT CASTLE PORTFOLIO

A MAIN PROJECT REPORT

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Submitted for Semester Main-Project viva-voce examination held on 08-07-24

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Light Castle is a cutting-edge application developed using React with Next.js, TypeScript, AWS services, and FastAPI for email functionalities. This project aims to revolutionize the transport industry by providing a robust platform for efficient goods movement and transportation services. The application features a modern architecture leveraging React with Next.js for frontend development, ensuring a responsive and intuitive user interface. TypeScript enhances code quality and maintainability, while AWS services such as S3 for storage and SES for email handling facilitate scalable and reliable backend operations.

FastAPI, a modern Python web framework, powers the backend, enabling seamless integration of email functionalities for notifications, customer communication, and administrative alerts. This abstract outlines the technological foundation and strategic approach of Light Castle, showcasing its potential to streamline logistics operations and enhance user experience through advanced features and reliable infrastructure.

CONCLUSION

6. CONCLUSION

Effective system maintenance and continuous enhancement are fundamental pillars for ensuring the long-term success and relevance of the Light Castle portfolio website. By diligently following robust maintenance strategies and responding to user feedback, the website can consistently deliver value to its users and stakeholders. Key considerations include:

- **Security and Stability:** Implementing proactive security measures and regular system audits to safeguard sensitive data and maintain system stability.
- **User-Centric Approach:** Prioritizing user feedback to drive improvements that enhance usability, functionality, and overall user experience.
- **Adaptability to Technological Advancements:** Keeping pace with evolving technologies through continuous learning and strategic adoption of new tools and frameworks.
- **Iterative Enhancement Process:** Planning and implementing enhancements in iterative cycles, ensuring that new features and improvements align with business goals and user expectations.

By adhering to these principles, Light Castle can not only meet current demands but also anticipate future needs, thereby maintaining its competitive edge in the digital landscape.

PREDICTION OF CARDIOVASCULAR DISEASES USING DEEP LEARNING

A MAIN PROJECT REPORT

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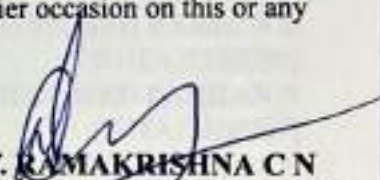
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INTERNAL EXAMINER.

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ABSTRACT

Cardiovascular diseases (CVDs) are a leading cause of mortality worldwide. Early detection and accurate diagnosis of CVDs are crucial for effective intervention and improved patient outcomes. Retinal imaging has emerged as a non-invasive and cost-effective technique for CVD prediction. This study aims to develop a deep learning model using convolutional neural networks (CNNs) and Mobi leNet architecture to predict CVDs from retinal images. The proposed model leverages the capabilities of CNNs to automatically learn relevant features from retinal images and MobileNet's lightweight design for efficient deployment. A large dataset of retinal images, including healthy individuals and CVD patients, is utilized for model training and evaluation. The retinal images are pre-processed, including resizing, normalization, and augmentation techniques, to enhance data quality and diversity. The CNN model architecture is designed, incorporating MobileNet as the base network and additional layers for adaptation to the specific CVD prediction task.

Through extensive training and optimization, the model learns to accurately classify retinal images as either indicative of CVD presence or absence. Performance evaluation is conducted using standard metrics such as accuracy. The developed deep learning model demonstrates promising results in predicting CVDs from retinal images, offering potential benefits in early detection, risk assessment, and cost-effective diagnosis.

This model has the potential to support healthcare professionals in making informed decisions, enabling timely interventions and preventive healthcare strategies. Further validation and integration into clinical settings are warranted to fully assess its clinical utility and impact on patient care.

Keywords: Retinal images and deep learning algorithms

CHAPTER 7

CONCLUSION

In conclusion, the proposed system utilizing deep learning for predicting cardiovascular diseases with retinal images shows promise in leveraging the power of artificial intelligence to aid in early detection and risk assessment. By analyzing retinal images, the system can potentially identify patterns and markers associated with cardiovascular risk factors, providing valuable insights for healthcare professionals. The system's performance is evaluated through rigorous training, validation, and testing, ensuring its accuracy and reliability. If successfully deployed, this system has the potential to revolutionize cardiovascular disease prediction by offering a non-invasive and accessible approach that complements existing diagnostic methods. Further research and validation are needed to optimize and refine the system, ultimately contributing to improved patient care and outcomes.

7.2 FUTURE ENHANCEMENT

Enhanced Deep Learning Models: Researchers can explore more advanced deep learning architectures and techniques to improve the accuracy and robustness of the prediction models. This could involve investigating newer models, such as recurrent neural networks (RNNs), attention mechanisms, or hybrid models that combine multiple modalities.

Larger and Diverse Datasets: Acquiring larger and more diverse datasets can help improve the generalizability and performance of the models. Collaboration among healthcare institutions and data sharing initiatives can facilitate the collection of comprehensive datasets, encompassing various demographic factors, disease subtypes, and risk factors.

Multi-Modal Approaches: Combining retinal images with other medical data sources, such as genetic information, electronic health records, or clinical measurements, can enhance the prediction accuracy and provide a more comprehensive risk assessment. Integration of multi-modal data can be explored using fusion techniques or joint learning frameworks.

IOT ENABLED WATER LEVEL MEASUREMENT

A MAIN PROJECT REPORT

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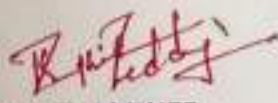PROJECT GUIDE
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NTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The Internet of Things (IoT) has revolutionized numerous industries by providing enhanced connectivity, data collection, and real-time monitoring capabilities. This abstract presents an overview of an IoT-enabled water level measurement system designed to address the critical need for efficient water resource management. The system integrates advanced sensor technologies, wireless communication, and data analytics to provide accurate and real-time water level monitoring in various applications such as reservoirs, rivers, lakes, groundwater wells, and storage tanks.

The core components of the IoT-enabled water level measurement system include high-precision sensors (ultrasonic, capacitive, or radar), IoT communication modules (Wi-Fi, LoRa, or cellular networks), and a centralized cloud-based monitoring platform. Sensors continuously measure water levels and transmit the data wirelessly to the cloud, where it is processed, stored, and analyzed. The cloud platform offers a user-friendly interface for real-time monitoring, data visualization, and automated alerts for predefined water level thresholds.

Key features of the system include:
- **Real-Time Monitoring**: Continuous water level measurement and instant data transmission to the cloud for real-time access.
- **Remote Accessibility**: Users can monitor water levels from anywhere using web-based dashboards or mobile applications.
- **Data Analytics**: Advanced algorithms analyze historical and real-time data to identify trends, predict future water levels, and generate actionable insights.
- **Automated Alerts**: Instant notifications for abnormal water levels or system malfunctions, enabling proactive management and timely interventions.
- **Scalability and Flexibility**: The system can be easily expanded to include additional sensors and monitoring points, making it suitable for various scales and applications.

The IoT-enabled water level measurement system enhances water management efficiency by providing accurate, real-time data and predictive insights, thereby supporting sustainable water usage, flood prevention, and resource optimization. The integration of IoT technology not only improves the reliability and effectiveness of water level monitoring but also reduces operational costs and manual intervention

CONCLUSION

In this project, we successfully designed an IoT water level monitoring system using an ESP32 microcontroller, an ultrasonic sensor (HC-SR04), and an LED display. The system provides real-time water level measurements, alerts for low water levels, and visual feedback through the LED display.

By combining these components, we've created an efficient and cost-effective solution for water management and flood prevention.

Creating your own smart home has never been easier. With this ESP32 IoT project, you can transform your ordinary appliances into smart devices that can be controlled effortlessly. Say goodbye to the hassle of manually operating your devices and embrace the power of automation. What are you waiting for? Start building your dream smart home today.

Building an IoT-based water level monitoring system allows you to remotely monitor the water level and receive notifications when it drops below a certain threshold. Through the combination of ESP32, Blynk, and an ultrasonic sensor, you can ensure efficient water management and prevent potential issues. For more exciting technology articles and projects.

IOT ENABLED FIRE ALARM

A MAIN PROJECT REPORT

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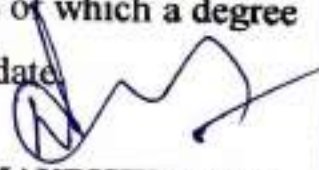
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INTERNAL EXAMINER

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ABSTRACT

The advent of the Internet of Things (IoT) has revolutionized various industries, including the domain of fire safety and emergency management. This abstract presents an overview of IoT-enabled fire alarm systems, highlighting their capabilities, benefits, and implications for modern fire detection and management.

IoT-enabled fire alarm systems integrate advanced sensors, communication technologies, and data analytics to provide real-time monitoring and early detection of fire incidents. These systems utilize a network of interconnected devices, such as smoke detectors, temperature sensors, and motion detectors, deployed strategically throughout buildings and infrastructures. Through continuous data collection and analysis, IoT-enabled fire alarms can accurately identify potential fire hazards, anomalies in environmental conditions, and human presence within monitored areas.

One of the key advantages of IoT-enabled fire alarm systems is their ability to facilitate rapid response and mitigation efforts. By automatically detecting fire incidents and transmitting alerts to designated stakeholders, including building occupants, emergency responders, and facility managers, these systems enable swift action to minimize property damage, mitigate risks to human safety, and enhance overall emergency preparedness.

Furthermore, IoT-enabled fire alarm systems offer enhanced monitoring and management capabilities through centralized control platforms and cloud-based applications. These platforms enable remote access to real-time data, historical records, and system diagnostics, empowering stakeholders to make informed decisions, optimize resource allocation, and improve the effectiveness of fire prevention and suppression strategies.

However, the adoption of IoT-enabled fire alarm systems also poses several challenges and considerations, including cybersecurity risks, interoperability issues, and privacy concerns. Addressing these challenges requires comprehensive risk assessments, robust cybersecurity measures, and adherence to industry standards and regulations to ensure the reliability, security.

CONCLUSION

As we stand on the brink of a new era in fire safety, IoT-enabled fire alarm systems represent a transformative leap forward. By harnessing the power of connectivity, intelligence, and integration, these systems offer unparalleled levels of protection, enabling us to detect, prevent, and respond to fires with greater efficiency and effectiveness than ever before. As we embrace these innovations, we move closer to a future where safety knows no bounds.

In conclusion, the integration of Internet of Things (IoT) technology into fire alarm systems represents a significant advancement in fire safety and emergency response. By leveraging IoT-enabled sensors, these fire alarms can detect potential fire hazards more accurately and in real-time, enhancing early detection and prevention efforts.

Furthermore, IoT-enabled fire alarms offer remote monitoring capabilities, allowing authorities and building managers to receive instant alerts and respond promptly to emergencies, even from remote locations. This can greatly reduce response times and minimize the risk of property damage and loss of life.

Additionally, the data collected by IoT fire alarm systems can be analyzed to identify trends and patterns, enabling proactive maintenance and optimization of fire safety measures. This not only improves the overall efficiency of fire prevention strategies but also reduces maintenance costs and enhances the reliability of fire alarm systems.

Overall, IoT-enabled fire alarms have the potential to revolutionize fire safety by providing enhanced detection, rapid response, and proactive maintenance capabilities. As technology continues to advance, these systems will play an increasingly vital role in safeguarding lives and property against the devastating effects of fires.

HEART MONITORING SYSTEM

A MAIN PROJECT

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Cardiovascular diseases are a leading cause of morality worldwide,necessitating effective and accessible heart monitoring solutions. This report presents a comprehensive exploration of a novel heart monitoring system leveraging Raspberry Pi, aimed at providing affordable and reliable cardiac health monitoring capabilities.

The proposed heart monitoring system integrates Raspberry Pi, a versatile single-board computer, with physiological sensors to enable continuous monitoring of vital signs. This innovative approach offers several advantages, including affordability, portability,and ease of deployment in various healthcare settings.

Key components of the proposed heart monitoring system include a network of IOT enabled devices,such as physiological sensors the system incorporates sensors to capture vital parameters such as electrocardiogram(ECG) signals, heart rate, and blood oxygen saturation levels, data acquisition and processing, wireless connectivity, user interface and data visualization. These devices facilitate real-time data acquisition and communication, enabling scamless connectivity and coordination throughout the shipping process.

The Raspberry Pi – based heart monitoring system offers significant potential in telemedicine applications, enabling continuous monitoring of patients' cardiac health outside clinical settings. By leveraging open-source software and hardware components, the system promotes scalability and customization to suite diverse healthcare needs.

Challenges associated with deploying a Raspberry Pi – based heart monitoring system,including signal quality assurance, power efficiency, and data security, are addressed in this report. Practical solutions and recommendations are provided to optimize system performance and reliability.

In conclusion, the integration of Raspberry Pi with physiological sensors offers a promising approach to developing cost-effective and accessible heart monitoring system. The insights and recommendations provided in this report aim to support healthcare professionals,researchers, and developers in harnessing the potential of Raspberry Pi for improving cardiac care and patient outcomes

Conclusion:

The heart monitoring system developed using Raspberry Pi represents a significant advancement in healthcare technology, offering real-time monitoring and analysis of patients' cardiovascular health. Throughout the project, we have successfully integrated hardware components, developed robust software applications, and ensured seamless communication between the Raspberry Pi device and the server.

Achievements and Findings:

- **Hardware Integration**: We integrated sensors such as ECG and pulse oximeters with Raspberry Pi, leveraging its GPIO pins and communication protocols like I2C for reliable data acquisition.
- **Software Development**: Our software included data processing algorithms for real-time heart rate analysis, user-friendly interfaces for healthcare professionals, and secure data transmission protocols.
- **System Integration**: The system effectively communicated with external databases and healthcare information systems, ensuring interoperability and data continuity.

Benefits and Impact:

- **Enhanced Patient Care**: The system facilitates continuous monitoring of vital signs, enabling early detection of anomalies and prompt medical intervention, thereby improving patient outcomes.
- **Cost-effective Solution**: Raspberry Pi's affordability and versatility make it an ideal platform for developing healthcare solutions, offering cost-effective alternatives to traditional monitoring systems.
- **Scalability and Accessibility**: The system's design allows for scalability to accommodate varying healthcare settings, from clinics to remote monitoring in home care environments.

Future Scope:

- **Advanced Data Analytics**: Implement machine learning algorithms to provide predictive analytics based on historical data trends, aiding in personalized patient care and proactive health management.
- **IoT Integration**: Explore Internet of Things (IoT) technologies to enhance connectivity and remote monitoring capabilities, enabling real-time updates and alerts to healthcare providers and caregivers.
- **Enhanced User Interfaces**: Develop mobile applications or web interfaces for patients to monitor their own health metrics and share data securely with healthcare professionals.
- **Regulatory Compliance**: Continuously update the system to comply with evolving healthcare regulations (e.g., GDPR, HIPAA) and standards to ensure patient data privacy and security.

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Report on

Agrocraft Agriculture

E-COMMERCE

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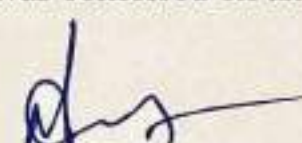

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The rapid advancement of technology and the widespread use of the internet have revolutionized the retail industry, giving rise to e-commerce as a dominant force in global trade. E-commerce, or electronic commerce, refers to the buying and selling of goods and services over the internet. This paper explores the evolution, benefits, challenges, and future prospects of e-commerce. The study highlights how e-commerce has transformed traditional business models by providing consumers with greater convenience, a wider selection of products, and competitive pricing. Additionally, it examines the operational efficiencies e-commerce brings to businesses, including reduced overhead costs and expanded market reach. However, the growth of e-commerce also presents several challenges, such as cybersecurity threats, logistics and supply chain complexities, and regulatory issues. The paper concludes with an analysis of emerging trends, such as mobile commerce, personalized shopping experiences through artificial intelligence, and the integration of blockchain technology, which are poised to shape the future landscape of e-commerce. Through this comprehensive examination, the paper aims to provide insights into the dynamics of e-commerce and its significant impact on the global economy.

6.1   Conclusion

Conclusion on E-Commerce AgroCraft Agriculture Website

The AgroCraft agriculture e-commerce website embodies the integration of advanced technology, strategic planning, and ongoing maintenance to create a robust, user-friendly platform. This e-commerce site is tailored to meet the unique needs of the agricultural sector, facilitating the buying and selling of agricultural products with ease and efficiency. Here's a concise summary:

Key Highlights

> Comprehensive Technology Stack

The selection of a robust technology stack, including frontend frameworks like React or Angular, backend frameworks like Node.js with Express or Spring Boot, and databases like PostgreSQL and MongoDB, ensures that the platform is both scalable and performant. The use of Redis for caching and RabbitMQ or Kafka for message queuing further enhances the system's efficiency.

> Core Service Implementations

- **User Management**: Secure registration, login, and user management using JWT.
- **Product Management**: Efficient CRUD operations for products.
- **Order Management**: Streamlined process from cart to checkout.
- **Payment Processing**: Secure and reliable payment gateways.
- **Inventory Management**: Real-time stock updates.
- **Review and Rating**: User feedback mechanisms.

> Effective DevOps Practices

Using Docker for containerization and Kubernetes for orchestration ensures scalability and manageability. CI/CD pipelines automate testing and deployment, ensuring that the system remains up-to-date and reliable.

> Proactive Monitoring and Logging

Real-time monitoring with Prometheus and Grafana, alongside centralized logging with the ELK stack, allows for proactive issue detection and resolution. This ensures high availability and performance.

> Maintenance Strategies
> Regular Updates and Security

Regular security patches and updates are critical to protect against vulnerabilities. Ongoing security scans and compliance with data protection regulations like GDPR and PCI-DSS ensure the platform remains secure and trustworthy.

Report on

Agrocraft Agriculture

E-COMMERCE

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Using Docker for containerization and Kubernetes for orchestration ensures scalability and manageability. CI/CD pipelines automate testing and deployment, ensuring that the system remains up-to-date and reliable.

> Proactive Monitoring and Logging

Real-time monitoring with Prometheus and Grafana, alongside centralized logging with the ELK stack, allows for proactive issue detection and resolution. This ensures high availability and performance.

> Maintenance Strategies
> Regular Updates and Security

Regular security patches and updates are critical to protect against vulnerabilities. Ongoing security scans and compliance with data protection regulations like GDPR and PCI-DSS ensure the platform remains secure and trustworthy.

AI Based Health Care Chatbot

A MAIN PROJECT REPORT

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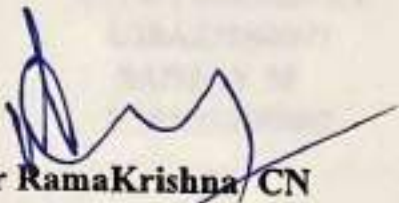1#89/90, Soldevanahalli, Hesaraghatta road, Bengaluru – 560107

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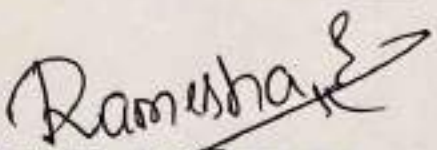
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INTERNAL EXAMINER   **EXTERNAL EXAMINER**

ABSTRACT

In recent years, AI-based technologies have revolutionized various sectors, including healthcare. One notable application is the development of healthcare chatbots, powered by artificial intelligence (AI), which serve as virtual assistants capable of interacting with users in natural language. This abstract explores the design, implementation, and benefits of such AI-driven healthcare chatbots.

These chatbots utilize natural language processing (NLP) and machine learning (ML) algorithms to understand user inquiries, provide relevant information, offer medical advice, and even assist in triaging patients based on symptoms. They operate 24/7, offering immediate responses and reducing the burden on healthcare providers. Moreover, they can integrate with electronic health records (EHRs) to access patient histories securely, enhancing diagnostic accuracy and treatment recommendations.

This abstract provides a concise overview of the potential and challenges of AI-based healthcare chatbots, focusing on their role in enhancing healthcare accessibility and efficiency.

CONCLUSION

The development and implementation of AI-powered healthcare chatbots represent a significant advancement in modern healthcare delivery. These intelligent virtual assistants have demonstrated their potential to enhance patient engagement, provide timely medical advice, and streamline healthcare processes. By leveraging natural language processing (NLP) and machine learning algorithms, these chatbots can effectively interpret user queries, offer personalized recommendations, and assist in triaging patients based on symptoms.

Moreover, AI healthcare chatbots contribute to improving healthcare accessibility by offering round-the-clock availability and reducing the burden on healthcare providers. They can integrate seamlessly with electronic health records (EHRs), ensuring that medical decisions are informed by comprehensive patient data. This integration not only enhances diagnostic accuracy but also facilitates continuity of care across different healthcare settings.

However, challenges such as data privacy concerns, ethical considerations, and regulatory compliance must be carefully addressed to maximize the benefits of AI in healthcare. Ensuring robust security measures and maintaining transparency in how patient data is utilized are crucial steps towards building trust and acceptance among both healthcare professionals and patients. Looking ahead, further advancements in AI technologies hold promise for expanding the capabilities of healthcare chatbots, enabling them to handle more complex medical inquiries, support remote patient monitoring, and contribute to personalized medicine initiatives. As AI continues to evolve, healthcare chatbots are poised to play a pivotal role in transforming the healthcare landscape, ultimately improving outcomes and enhancing the overall patient experience.

This conclusion summarizes the potential impact of AI healthcare chatbots, emphasizing their benefits, challenges, and future prospects in shaping the future of healthcare delivery.

EMPLOYEE DTATBASE MANAGEMENT SYSTEM

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SYNOPSIS

This project "**Employee Database Management System**" is to help improve workforce productivity, identify ways to engage and retain talent, and alleviate administrative burdens for HR professionals. Achieving greater efficiency through the use of technology can also help control costs and minimize compliance risks. Employee management that uses coaching to motivate and build trust with workers can unlock enormous human potential. Yet, communication tactics alone may fall short in the face of multi-generational workforces, rising numbers of freelance workers and complex regulations. Technology, whether it's workforce management software or a human capital management solution, can often help business leaders maintain productivity more effectively in rapidly changing environments.

9. CONCLUSION

In conclusion, this project has demonstrated the potential of utilizing machine learning algorithms to enhance blood donation management and increase the efficiency of donor recruitment efforts. By comparing the performances of two classification algorithms on the blood transfusion dataset, valuable insights have been gained into the predictive capabilities of these models. The system's ability to predict the likelihood of donors donating blood at the correct time holds promise for preventing critical shortages and ensuring timely availability of blood when needed. Moving forward, the proposed system presents opportunities for future enhancements, including the integration of additional data sources, real-time prediction capabilities, personalized donor outreach strategies, and the development of a mobile application. These enhancements have the potential to further optimize blood donation management, improve donor engagement, and enhance the overall effectiveness of the system. Overall, this project underscores the importance of leveraging data-driven approaches to address challenges in blood

donation management and highlights the potential for machine learning to make significant contributions to improving public health outcomes.

BLOOD DONATION PROBABILITIES AND NUMBER OF POSIBLE DONORS

A MAIN PROJECT REPORT

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EXTERNAL EXAMINER(14)

ABSTRACT

This project **"blood donation probabilities and number of possible donors"** aim to investigate and analyze the factors influencing blood donation probabilities and assess the potential number of donors within a specified population. Through comprehensive data analysis and statistical modeling, we will explore variables such as demographic characteristics, awareness campaigns, and societal attitudes towards blood donation. The objective is to identify patterns and correlations that can shed light on the likelihood of individuals participating in blood donation activities. Ultimately, the findings will contribute to a better understanding of the factors that impact blood donation rates and provide valuable insights for improving donation campaigns and increasing the pool of potential donors

9. CONCLUSION

In conclusion, this project has demonstrated the potential of utilizing machine learning algorithms to enhance blood donation management and increase the efficiency of donor recruitment efforts. By comparing the performances of two classification algorithms on the blood transfusion dataset, valuable insights have been gained into the predictive capabilities of these models. The system's ability to predict the likelihood of donors donating blood at the correct time holds promise for preventing critical shortages and ensuring timely availability of blood when needed. Moving forward, the proposed system presents opportunities for future enhancements, including the integration of additional data sources, real-time prediction capabilities, personalized donor outreach strategies, and the development of a mobile application. These enhancements have the potential to further optimize blood donation management, improve donor engagement, and enhance the overall effectiveness of the system. Overall, this project underscores the importance of leveraging data-driven approaches to address challenges in blood donation management and highlights the potential for machine learning to make significant contributions to improving public health outcomes.

COMPANY PROFIT AND LOSS PREDICTION

A MAIN PROJECT REPORT

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5.3 CONCLUSION

The quality and reliability of data used in predictive models are critical. Inaccurate or incomplete data can lead to biased predictions and undermine the reliability of forecasts. Businesses must invest in data quality assurance and governance processes to ensure that the data inputs into their models are accurate, consistent, and up-to-date.

Another challenge lies in the assumptions underlying predictive models. These models often make simplifying assumptions about the relationships between variables, which may not always hold true in practice. Changes in these relationships or unexpected events (such as "black swan" events) can lead to significant deviations between predicted and actual outcomes.

Furthermore, profit and loss prediction should not rely solely on quantitative models. Qualitative factors, such as industry expertise, market knowledge, and strategic insights, play a crucial role in understanding the broader context and interpreting the implications of predictive results. Combining quantitative analysis with qualitative judgment allows businesses to make more informed decisions and navigate uncertainties effectively.

In conclusion, while profit and loss prediction models provide valuable insights and decision support, they should be used cautiously and complemented with qualitative assessments. By understanding the theoretical foundations, limitations, and challenges inherent in predictive modeling, businesses can maximize the utility of these tools and enhance their financial planning and strategic decision-making capabilities.

FACE RECOGNITION SYSTEM

A MAIN PROJECT REPORT

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ABSTRACT

With every passing day, we are becoming more and more dependent upon technology to carry out even the most basic of our actions. Facial detection and Facial recognition help us in many ways, be it sorting of photos in our mobile phone gallery by recognizing pictures with their face in them or unlocking a phone by a mere glance to adding biometric information in the form of face images in the country's unique ID database (Aadhaar) as an acceptable biometric input for verification.

This project lays out the basic terminology required to understand the implementation of Face Detection and Face Recognition using Intel's Computer Vision library called 'OpenCV'.

It also shows the practical implementation of the Face Detection and Face Recognition using OpenCV with Python embedding on Windows platform. The aim of the project is to implement Facial Recognition on faces that the script can be trained for. The input is taken from a webcam and the recognized faces are displayed along with their name in real time. This project can be implemented on a larger scale to develop a biometric attendance system which can save the time-consuming process of manual attendance system.

5.2 LIMITATIONS

- Data Storage: Extensive data storage is required for creating, training and maintaining big face databases which is not always feasible.

- Computational Power: The requirement of computational power also increases with increase in the size of the database. This becomes financially out of bounds for smaller organizations.

- Camera Angle: The relative angle of the target's face with the camera impacts the recognition rate drastically. These conditions may not always be suitable, therefore creating a major drawback.

5.3 CONCLUSION

Facial Detection and Recognition systems are gaining a lot of popularity these days. Most of the flagship smartphones of major mobile phone manufacturing companies use face recognition as the means to provide access to the user. This project report explains the implementation of face detection and face recognition using OpenCV with Python and also lays out the basic information that is needed to develop a face detection and face recognition software. The goal of increasing the accuracy of this project will always remain constant and new configurations and different algorithms will be tested to obtain better results. In this project, the approach we used was that of Local Binary Pattern Histograms that are a part of the FaceRecognizer Class of OpenCV.

MAIN PROJECT REPORT ON

CREDIT CARD FRAUD DETECTION

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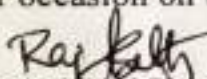(NAAC Re-Accredited 'A'' and Affiliated to Bengaluru City University)

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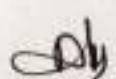
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ABSTRACT

It is vital that credit card companies are able to identify fraudulent credit card transactions so that customers are not charged for items that they did not purchase. Such problems can be tackled with Data Science and its importance, along with Machine Learning, cannot be overstated. This project intends to illustrate the modelling of a data set using machine learning with Credit Card Fraud Detection. The Credit Card Fraud Detection Problem includes modelling past credit card transactions with the data of the ones that turned out to be fraud. This model is then used to recognize whether a new transaction is fraudulent or not. Our objective here is to detect 100% of the fraudulent transactions while minimizing the incorrect fraud classifications. Credit Card Fraud Detection is a typical sample of classification. In this process, we have focused on analysing and pre-processing data sets as well as the deployment of multiple anomaly detection algorithms such as Local Outlier Factor and Isolation Forest algorithm on the PCA transformed Credit Card Transaction data.

7. CONCLUSION

Credit card fraud is without a doubt an act of criminal dishonesty. This article has listed out the most common methods of fraud along with their detection methods and reviewed recent findings in this field. This paper has also explained in detail, how machine learning can be applied to get better results in fraud detection along with the algorithm, pseudocode, explanation its implementation and experimentation results. While the algorithm does reach over 99.6% accuracy, its precision remains only at 28% when a tenth of the data set istaken into consideration. However, when the entire dataset is fed into the algorithm, the precision rises to 33%. This high percentage of accuracy is to be expected due to the huge imbalance between the number of valid and number of genuine transactions.

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   By Massimiliano Zanin, Miguel Romance, Regino Criado, and SantiagoMoral" published by Hindawi Complexity Volume 2018, Article ID 5764370, 9 pages

Bachelore of computer application   Bachelore of computer application

A MACHINE LEARNING MODEL FOR SALES PREDICTION

A MAIN PROJECT REPORT

Submitted by

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ARSHAL C(U18AJ21S0116)
K REHAN RAKESH (U18AJ21S0189)
HEMARIS M P(U18AJ21S0125)

A report submitted in partial fulfilment of the requirements for the Award of Degree of

BACHELOR OF COMPUTER APPLICATION

Under the guidance of

Ms. ASWATHI RAVEENDRAN
(Assistant Professor, Department of Computer Application, AIGS)

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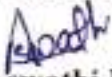
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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Problem Statement:

Regression is an important machine learning model for these kinds of problems. Predicting sales of a company needs time series data of that company and based on that data the model can predict the future sales of that company or product. So, in this research project we will analyse the time series sales data of a company and will predict the sales of the company for the coming quarter and for a specific product. For this kind of project of sales predict, we will apply the linear regression and logistic regression and evaluate the result based on the training, testing and validation set of the data.

Background:

A sales analysis report shows the trends that occur in a company's sales volume over time. In its most basic form, a sales analysis report shows whether sales are increasing or declining. At any time during the fiscal year, sales managers may analyze the trends in the report to determine the best course of action. Managers often use sales analysis reports to identify market opportunities and areas where they could increase volume. For instance, a customer may show a history of increased sales during certain periods. This data can be used to ask for additional business during these peak periods. A sales analysis report shows a company's actual sales for a specified period a quarter, a year, or any time frame that managers feel is significant. In larger corporations, sales analysis reports may only contain data for a subsidiary, division or region. A small-business manager may be more interested in breaking sales down by location or product. Some small, specialized businesses with a single location are compact enough to use general sales data. A sales analysis report may compare actual sales to projected sales. Linear regression and logistic regression is the best machine learning models for this kind of problem where we can easily fit a line of high sale and low sale product, quarters and zone for a product. Also we need huge amount of data for the training of the model which we can collect from the sales data of any product or company of last 1 or 2 years for any live project. However, for this research project, the description of the dataset which we are going to use for this project is provided in the dataset portion of experimental setup section

Methodology:

In this research, linear regression and logistic regression model will be trained and tested for our dataset. For this we will download some sample dataset in dataset. The raw data is then undergoes for feature selection and feature extraction. After that we will apply machine learning regression models for the training dataset to train the model. This train model will be then tested on test dataset and validation dataset for checking the accuracy of the model

10.CONCLUSION

Thus, Linear Regression attempts to model the relationship between two variables by fitting a linear equation to observed data. Made an attempt to evaluate data with simple linear regression and multiple linear regression. Predicting sales of a company needs time series data of that company and based on that data the model can predict the future sales of that company or product. So, in this research project analyzed the time series sales data of a company and predicted the sales of the company for the coming quarter and for a specific product. Scatterplot helped to obtain the desired graph. Also predicted the sales with respect to the user inputs.

INSTAGRAM CLONE USING FIGMA

A MAIN PROJECT REPORT

Submitted by

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in partial fulfillment for the award of the degree of

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ABSTRACT

This project report outlines the development of an Instagram clone using Figma, a premier designtool for interface creation and prototyping. The objective of this project was to replicate thekey functionalities and design aesthetics of Instagram, a leading social media platform, to gainpractical experience in UI/UX design principles and modern prototyping techniques.

The project commenced with a thorough analysis of Instagram's user interface, identifying essential components such as the feed, stories, profile page, and interaction buttons. The replication process involved creating wireframes, high-fidelity mockups, and interactive prototypesin Figma, ensuring a seamless user experience. Emphasis was placed on maintaining visual consistency, intuitive navigation, and responsive design to accommodate various device sizes.

Additionally, this report details the methodologies employed, including the use of Figma's auto-layout features, component libraries, and collaboration tools, which facilitated efficient designiterations and feedback integration. The outcome is a fully functional prototype that mirrors Instagram's interface, serving as a testament to the practical application of design theories and tool proficiencies gained throughout the course.

This project not only underscores the importance of meticulous design replication but also highlights the capabilities of Figma as a powerful tool in modern UI/UX design workflows.

5. CONCLUSION

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The project report on developing an Instagram clone using Figma has provided numerous insights and valuable experiences. The primary objective was to design and prototype an Instagram-like application using Figma, a powerful design tool widely used for UI/UX design. Through this project, several key findings and accomplishments have been identified.

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Additionally, the project highlighted the significance of user-centered design principles. Feedback from potential users was integral in refining the design to meet user needs and expectations. This iterative process of prototyping, testing, and refining ensured that the final design was intuitive, engaging, and user-friendly. It also emphasized the need for continuous user feedback even post-deployment to maintain and enhance the application.

Furthermore, the project identified several challenges and areas for improvement. One significant challenge was ensuring that the design was scalable and adaptable to different devices and screen sizes. Another challenge was maintaining a balance between visual appeal

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INTERNAL EXAMINER

EXTERNAL EXAMINER

INSTAGRAM CLONE USING FIGMA

A MAIN PROJECT REPORT

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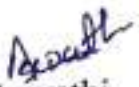(NAACRe-Accredited 'A'' and AffiliatedtoBengaluruCityUniversity)

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FIFA 21 : EDA AND VISUALIZATION

A MAIN PROJECT REPORT

Submitted by

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in partial fulfillment for the award of the degree of

BACHELOR OF COMPUTER APPLICATION

Under the guidance of

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Football is a popular sport, however, it is a big business as well. From a managerial perspective, the important decisions that team managers make —Concerning player transfers, issues related to player valuation, especially the determination of transfer fees and market values, are of major concern. Market values can be understood as estimates of transfer fees— prices that could be paid for a player on the football market. Therefore, market values play an important role in transfer negotiations. The market has traditionally been estimated by football experts. However, expert judgments are inaccurate and not transparent. Data analytics may thus provide a sound alternative or a complementary approach to experts-based estimations of market value. In this study, we propose an objective quantitative method to determine football players' market values. The method is based on the application of machine learning algorithms to the performance data of football players. The data used in the experiment are FIFA 20 video game data, collected from sofifa.com. We estimate players' market values using four regression models that were tested on the full set of features—linear regression, multiple linear regression, decision trees, and random forests. Moreover, we seek to analyze the data and identify the most important factors affecting the determination of the market value. In the experimental results, random forest performed better than other algorithms for predicting the players' market values. It has achieved the highest accuracy score and lowest error ratio compared to baseline. The results show that our methods are capable to address this task efficiently, surpassing the performance reported in previous works. Finally, we believe our results can play an important role in the negotiations that take place between football clubs and a player's agents. This model can be used as a baseline to simplify the negotiation process and estimate a player's market value in an objective quantitative way.

Conclusion

We have checked upon the data, and as of now inferred upon a set of conclusions. These are listed in the below points:

1. Firstly, EA Sports is really a fan of English football, and the amount of English football dominanace in FIFA 21 is as much as any older version. However, the ratings were not biased and were alloted in a sensible manner.

2. FIFA 21 has a huge collection of Clubs in record, and almost covers all the Major Leagues of the world. Also going by Nationality, it supports almost all the football playing nations. Overall the span of the game is huge and charming for every player who is a part of it.

3. The Height and Weight distribution of the players is sensibly distributed. Its generally directly proportional, with a few outlier cases.

4. The Player performance Radar Chart is made considering only a handful attributes- that have clearly indicated the supremacy of the Center Half and the Forwards. In the upcoming commits, I will work upon to make the attributes more distributed towards all the positions.

5. In my opinion, the overall ratings were given correctly depending upon the recent performance, keeping the age factor in mind. This has been well though of by the FIFA Team.

6. Regarding the formation, I am most comfortable with 4 players in the center field hence I have provided this set. However, I am looking into ways to provide multiple formation combinations that might produce an amazing team. Will be working for the same in the upcoming releases.

Regarding the Data:

1. The Data is extremely detailed and this analysis can be expanded much further due to the great extent of the data. This is something I found really great to work with. I plan to make much more out of this data.

71

INSTAGRAM CLONE USING FIGMA

A MAIN PROJECT REPORT

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EXTERNAL EXAMINER

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FIFA 21 : EDA AND VISUALIZATION

A MAIN PROJECT REPORT

Submitted by

Abhishek Gotagi	(U18AJ21S0292)
Ravikumar C	(U18AJ21S0312)

in partial fulfillment for the award of the degree of

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INTERNAL EXAMINER(14)

EXTERNAL EXAMINER(14)

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Football is a popular sport; however, it is a big business as well. From a managerial perspective, the important decisions that team managers make —Concerning player transfers, issues related to player valuation, especially the determination of transfer fees and market values, are of major concern. Market values can be understood as estimates of transfer fees— prices that could be paid for a player on the football market. Therefore, market values play an important role in transfer negotiations. The market has traditionally been estimated by football experts. However, expert judgments are inaccurate and not transparent. Data analytics may thus provide a sound alternative or a complementary approach to experts-based estimations of market value. In this study, we propose an objective quantitative method to determine football players' market values. The method is based on the application of machine learning algorithms to the performance data of football players. The data used in the experiment are FIFA 20 video game data, collected from sofifa.com. We estimate players' market values using four regression models that were tested on the full set of features—linear regression, multiple linear regression, decision trees, and random forests. Moreover, we seek to analyze the data and identify the most important factors affecting the determination of the market value. In the experimental results, random forest performed better than other algorithms for predicting the players' market values. It has achieved the highest accuracy score and lowest error ratio compared to baseline. The results show that our methods are capable to address this task efficiently, surpassing the performance reported in previous works. Finally, we believe our results can play an important role in the negotiations that take place between football clubs and a player's agents. This model can be used as a baseline to simplify the negotiation process and estimate a player's market value in an objective quantitative way.

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KLASSY CAFE

A MAIN PROJECT REPORT

Submitted by

MUHAMMED RAZAL
(U18AJ21S0289)

MOHAMMED RAHAN
(U18AJ21S0317)

THANSEER UL FUAD
(U18AJ21S0321)

in partial fulfillment for the award of the degree of
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Under the guidance of
Mrs. SHIVI DIXIT
Assistant Professor, Department of Computer Application, AIGS

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Mrs. SHIVI DIXIT
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Prof. RAMAKRISHNA C N
HEAD OF THE DEPARTMENT

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Submitted for Semester Main-Project viva-voce examination held on 8|7|24

INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

The project " KLASSY CAFE " is a web application designed to help manage restaurant operations efficiently. Built with PHP and MySQL for the backend, and HTML/CSS for the frontend, the system includes features such as viewing the menu and placing orders. JavaScript is utilized for interactivity, enhancing the user experience.

Users can browse the restaurant's menu, which includes descriptions and prices of dishes. They can also place orders by selecting items and specifying quantities.

This project demonstrates the basic functionality of an online restaurant management system, offering a foundation for future enhancements. It is designed to be simple, clear, and user-friendly, providing restaurant owners with a tool to improve operational efficiency and customer satisfaction.

Conclusion

The restaurant booking application is designed to enhance the dining experience for users and streamline management for restaurant administrators. This report covers the feasibility, system perspective, input and output design, database design, process design, testing, implementation, and maintenance of the application.

The application offers a user-friendly interface, efficient booking processes, secure payment methods, and reliable performance. Features like restaurant search, table booking, user reviews, and an admin panel ensure a seamless experience for both users and administrators.

The feasibility study confirms the application's potential for success, considering market demand, technical viability, and financial aspects. A structured design approach and rigorous testing ensure the application meets requirements and performs reliably. Maintenance strategies keep the application up-to-date, secure, and responsive to user needs.

In conclusion, this restaurant booking application is set to transform how users book dining experiences and how restaurants manage reservations. It meets current market needs and provides a foundation for future enhancements, ensuring long-term success and user satisfaction.

Flight Fare Prediction

A MAIN PROJECT REPORT

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Currently, everyone loves to travel by flights. Going along with the study, the charge of travelling through a plane change now and then. Additionally, it changes with special times of the year or celebration seasons. There are a few unique elements upon which the cost of air transport depends. The salesperson has data regarding each of the variables; however, buyers can get confined information which is not sufficient to foresee the airfare costs. Considering the provisions, for example, time of the day, the number of days remaining and the time of take-off this will provide the perfect time to purchase the plane ticket.

The motivation behind this paper is to concentrate on every component that impacts the variations in the costs of this means of transport and how these are connected with the diversity in the airfare. Subsequently, at that point, utilizing this data, construct a framework that can help purchasers when to purchase a ticket. Machine Learning algorithms prove to be the best solution for the above-discussed problems. In this project, there is an implementation of Artificial Neural Network (ANN), LR (Linear Regression), DT (Decision Tree), and RF (Random Forest).

6. CONCLUSION

This project successfully demonstrates the development of a comprehensive Twitter clone using cutting-edge web technologies. The application meticulously replicates essential Twitter functionalities, providing users with a familiar and intuitive platform for social interaction, content sharing, and real-time communication.

Key Features Implemented:

1. User Authentication: Secure sign-up and login processes, including email verification and password recovery.
2. User Profiles: Customizable profiles with bio, profile picture, and cover image options.
3. Tweet Functionality: Creation, editing, and deletion of tweets, including support for text, images, and hashtags.
4. Timeline: A dynamic home timeline displaying tweets from followed users in chronological order.
5. Follow/Unfollow System: Ability to follow/unfollow other users and view their public content.
6. Likes and Retweets: Interactive engagement features allowing users to like and retweet posts.
7. Comments and Replies: Threaded conversations and nested reply functionality.
8. Search Functionality: Robust search capabilities for users, tweets, and hashtags.
9. Direct Messaging: Private, real-time messaging between users.
10. Notifications: Real-time notifications for likes, retweets, mentions, and new followers.

TWITTER CLONE

A MAIN PROJECT REPORT

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INTERNAL EXAMINER.

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ABSTRACT

In today's digital age, social media platforms have become integral to communication and information dissemination. Among these platforms, Twitter stands out for its unique approach to microblogging, enabling users to share succinct updates, engage in real-time conversations, and stay informed about global events. This project aims to develop a comprehensive Twitter clone, replicating the core functionalities of Twitter while incorporating modern web development practices.

This project involves the development of a Twitter clone, a microblogging and social networking service. The platform allows users to post and interact with messages known as "tweets." Users can follow other users, like and retweet posts, and use hashtags to categorize content. The clone replicates key features of Twitter, including user authentication, profile management, real-time updates, and notifications. The project utilizes a modern web development stack, including a React.js frontend, Node.js/Express backend, and MongoDB for data storage. This project aims to provide a scalable, responsive, and user-friendly microblogging experience

6. CONCLUSION

This project successfully demonstrates the development of a comprehensive Twitter clone using cutting-edge web technologies. The application meticulously replicates essential Twitter functionalities, providing users with a familiar and intuitive platform for social interaction, content sharing, and real-time communication.

Key Features Implemented:

1. User Authentication: Secure sign-up and login processes, including email verification and password recovery.
2. User Profiles: Customizable profiles with bio, profile picture, and cover image options.
3. Tweet Functionality: Creation, editing, and deletion of tweets, including support for text, images, and hashtags.
4. Timeline: A dynamic home timeline displaying tweets from followed users in chronological order.
5. Follow/Unfollow System: Ability to follow/unfollow other users and view their public content.
6. Likes and Retweets: Interactive engagement features allowing users to like and retweet posts.
7. Comments and Replies: Threaded conversations and nested reply functionality.
8. Search Functionality: Robust search capabilities for users, tweets, and hashtags.
9. Direct Messaging: Private, real-time messaging between users.
10. Notifications: Real-time notifications for likes, retweets, mentions, and new followers.

STOCK MARKET PREDICTION

A MAIN PROJECT REPORT

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

TITLE: "Stock Market Prediction"

Stock Market Prediction System is the project on technical analysis, visualization, and prediction using data provided by Google Finance. By looking at data from the stock market, particularly some giant technology stocks and others. Used pandas to get stock information, visualized different aspects of it, and finally looked at a few ways of analyzing the risk of a stock, based on its previous performance history. Predicted future stock prices through a Monte Carlo method.

The purpose of this project is to comparatively analyze the effectiveness of prediction algorithms on stock market data and get general insight on this data through visualization to predict future stock behaviour and value at risk for each stock. The project encompasses the concept of Data Mining and Statistics. This project makes heavy use of NumPy, Pandas, and Data Visualization Libraries.

9. CONCLUSION

In conclusion, the intersection of artificial intelligence (AI) and machine learning (ML) with stock market prediction represents a significant leap forward in financial analytics. Throughout this project, we have explored how these technologies can harness vast amounts of data to forecast stock prices with a heightened level of accuracy and insight.

Beyond predictive capabilities, the integration of AI and ML fosters deeper understanding of market behaviors and dynamics. This deeper understanding facilitates more effective risk management strategies and enhances overall portfolio performance.

Looking forward, the ongoing evolution of AI and ML technologies promises even greater advancements in financial forecasting. As these technologies continue to mature, their application in finance will likely extend beyond predictive analytics to include personalized investment advice, automated trading strategies, and proactive risk mitigation measures.

In essence, this project underscores the transformative impact of AI and ML on the future of finance. By embracing innovation and leveraging data-driven insights, we are poised to unlock new opportunities and navigate the complexities of global markets with confidence and foresight.

FACE RECOGNITION ATTENDANCE SYSTEM

A MAIN PROJECT REPORT

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EXTERNAL EXAMINER   INTERNAL EXAMINER

ABSTRACT

The implementation of a "**Facial Recognition System**" can aid in identifying or verifying a person's identity from a digital image. Accurate attendance records are vital for employee. However, manual attendance tracking can result in errors, missed employees, or duplicate entries. The adoption of the Face Recognition-based attendance system could help eliminate these shortcomings. This innovative approach involves utilizing a camera to capture input images, detecting faces using algorithms such as Haarcascade, verifying the faces against a database of employee profiles, and marking attendance in an Excel sheet. The use of OpenCV, an open-source computer vision library, ensures the efficient functioning of the system. The proposed model involves training the system with the authorized employees faces to create a database. The system crops and stores the images in a database with corresponding labels and extracts features using algorithms such as Haarcascade. The Face Recognition-based attendance system could help automate attendance records with high accuracy and reduce the burden of manual attendance tracking.

CONCLUSION

In this approach, a face recognition based automated student attendance system is thoroughly described. The proposed approach provides a method to identify the individuals by comparing their input image obtained from recording video frame with respect to train image. Extraction of features from the facial image is performed by applying both LBP and PCA. The algorithm designed to combine LBP and PCA able to stabilize the system by giving consistent results. The accuracy of this proposed approach is 100% for high-quality images, 92.31% for low-quality images.

As a conclusion for analysis, the extraction of facial feature could be challenging especially in different lighting. In pre-processing stage, Contrast Limited Adaptive Histogram Equalization (CLAHE) able to reduce the illumination effect. CLAHE perform better compared to histogram equalization in terms of constraint improvement. Enhanced LBP with larger radius size specifically, radius size two, perform better compared to original LBP operator, with less affected by illumination and more consistent compared to other radius sizes.

It saves time and effort. Automated attendance system has been envisioned for the purpose of reducing the drawbacks in the traditional (manual) system.

FLUTTER APPLICATION

A MAIN PROJECT REPORT

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INTERNAL EXAMINER.   **EXTERNAL EXAMINER**

ABSTRAT

This document outlines the design, implementation, and functionality of a mobile application that provides buy or sell recommendations for stocks based on comprehensive technical, fundamental, and financial analysis. Developed using Flutter for the frontend and Python with Firebase for the backend, the application leverages advanced data analytics to process real-time market data and financial reports. The application's backend is built with Python, which handles the heavy lifting of data processing and analysis. Firebase serves as the real-time database, ensuring that users receive up-to-date information and recommendations. The system employs a combination of technical indicators, fundamental financial metrics to generate reliable investment recommendations.

Key features of the application include:

- **Real-Time Data Analysis:** Continuous monitoring and analysis of stock market data.

- **User-Friendly Interface:** A seamless and intuitive interface built with Flutter, providing an engaging user experience on both Android and iOS platforms.

- **Personalized Recommendations:** Customized buy or sell signals based on user preferences and risk tolerance.

This documentation covers the architecture of the application, the algorithms used for generating recommendations, and the steps for deploying and using the system. It serves as a comprehensive guide for developers, financial analysts, and end-users who seek to understand and leverage this powerful tool for enhancing their investment strategies.

8. CONCLUSION

The Stock Edge application successfully integrates real-time stock data scraping, user-friendly interfaces, and robust authentication mechanisms to deliver a comprehensive stock market analysis tool. The use of Flutter for front-end development ensures a smooth user experience, while Python and Firebase provide a reliable backend for data processing and storage.

By addressing gaps in existing stock market applications and providing enhanced data visualization and analytics, Stock Edge stands out as a valuable resource for investors. Future improvements could include additional data sources, advanced analytical tools, and further customization options to increase user engagement and satisfaction.

LOCATION BASED SMART ATTENDANCE USING FACE RECOGNITION

A Project Report

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This is to certify that the project entitled **"Location based smart attendance using face recognition"** is Submitted by Roshan Shaji MK, Rinchu G, Mohammed Zidan KV, Jose Zachariah towards Fulfilment of requirement for the award of the degree of Bachelor of Computer Application is a record of bona fide work carried out him/her during the academic year 2021-2024.

Project Guide

Head of The Department

Submitted for the Viva-Voice held on ....08/07/24........ at...ΛΙGΙS............

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SYNOPSIS

"A Location-Based Smart Attendance System Using Face Recognition" presents a contemporary solution for managing attendance in diverse settings such as educational institutions, businesses, and events. The system integrates location-based services and facial recognition technology to streamline attendance tracking. In environments like marketing offices where manual attendance marking can lead to errors, this system mitigates inaccuracies. Facial recognition, a form of biometric artificial intelligence, identifies individuals by analyzing facial features from a database, offering rapid and accurate attendance management. The inclusion of location-based authentication further prevents cheating, ensuring attendance accuracy. The system employs deep learning techniques and high-quality cameras for precise face detection and recognition. With a frontend GUI built on Electron JS and a backend logic implemented in Python, the system facilitates seamless communication and attendance recording. Overall, this system optimizes attendance management through efficient, reliable, and technologically advanced methods.

9.   CONCLUSION

In summary, the Location-Based Smart Attendance System Using Face Recognition offers a contemporary and efficient solution to attendance record management across diverse sectors like education, businesses, and events. By amalgamating location-based services with facial recognition technology, this system simplifies the attendance tracking process and addresses concerns surrounding inaccuracies and fraudulent activities common in traditional systems.

Facial recognition technology, a form of Biometric Artificial Intelligence, plays a central role in accurately identifying individuals from digital images or video frames, ensuring the reliability of attendance records. The system's multi-step process involves face detection and recognition methods, leveraging advanced techniques like deep learning for heightened accuracy.

The system's architecture, comprising a frontend GUI and backend logic in Electron JS and Python respectively, facilitates seamless communication and efficient image analysis. Additionally, the integration of a high-quality camera enhances performance, while location-based authentication prevents unauthorized access or tampering of attendance data.

In conclusion, the Location-Based Smart Attendance System Using Face Recognition presents a robust and dependable solution for organizations seeking to streamline attendance management processes while minimizing errors and enhancing security

CUSTOMER SEGMENTATION USING PYTHON

A MAIN PROJECT REPORT

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INTERNAL EXAMINER.

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Abstract

Customer segmentation is a technique for targeting customers in order to increase a company's revenue. It is all about collecting the information about the customers and grouping them based on their similarity. To achieve this, we had developed web application using streamlit to make use of k means algorithm, and then it can be visualized to target the customers. This method is used in business related fields applications. This paper deals with realtime data like customers age and consists of different variables related to its application. Once an algorithm done its task with data, it will complete the task automatically. To complete the task, we had done Python with Machine learning approach. After loading the data, the data gets visualized with the bar plots based on different variables. Important variables are identified. The number of clusters or groups is obtained by the method called Elbow method. These variables are fit into the Kmeans model. This plot would provide the details and the mentalities of customers, thereby helping the companies to improve the products and techniques to increase their sales. Customer segmentation is a vital strategy for businesses aiming to enhance their marketing efforts, improve customer satisfaction, and boost profitability. This project revolves around the concept of customer segmentation and its practical implementation. The primary objective is to categorize a company's customer base into distinct groups based on shared characteristics and behaviors. The project begins with data collection, where various customer attributes such as demographics, purchase history, and online behaviour. are gathered. Following this, data analysis and machine learning techniques are applied to identify meaningful patterns and clusters within the dataset. These clusters represent different customer segments. The resulting customer segments can be leveraged in several ways. Firstly, they enable businesses to tailor their marketing strategies to cater to the unique needs and preferences of each segment. This targeted approach enhances customer engagement and increases the likelihood of conversion.

CONCLUSION

In the dynamic and datadriven business landscape of today, customer segmentation has proven to be a vital strategy for understanding and engaging with customers in a more personalized and effective manner. This project has provided a comprehensive overview of customer segmentation, its implementation, and its practical applications, shedding light on its significance for businesses seeking to thrive in a competitive market. The project began with the importance of data collection and the need for businesses to gather and organize customer data effectively. It emphasized that the success of customer segmentation hinges on the quality and quantity of data available, and the sources can range from demographics and purchase history to online behavior and beyond. Data analysis and modeling played a pivotal role in the project, as these techniques uncovered patterns and clusters within the customer data, leading to the identification of distinct customer segments. The various tools and methods discussed, including machine learning, data analytics, and business intelligence, equipped businesses with the means to perform this critical task. Practical applications of customer segmentation were explored indepth, showcasing the realworld benefits of this strategy. Businesses can use customer segments to finetune their marketing strategies, create personalized product recommendations, optimize inventory management, and deliver tailormade customer experiences. The segmentation approach ensures that the right product or message reaches the right customer at the right time, fostering customer satisfaction and loyalty. The benefits of customer segmentation are manifold, and this project underscored the potential for increased customer satisfaction, higher conversion rates, improved customer retention, and ultimately, greater profitability. Furthermore, the project addressed best practicesand common challenges associated with customer segmentation, providing valuable insights for businesses to navigate this journey successfully. In a world where customers expect tailored experiences and where market dynamics are continually evolving, the strategic adoption of customer segmentation has become a competitive necessity. This project has served as a valuable resource for businesses of all sizes, equipping them with the knowledge and tools needed to unlock the full potential of their customer data.

SHIP CLASSIFICATION USING VISION TRANSFORMER

A MAIN PROJECT REPORT

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INTERNAL EXAMINER.

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ABSTRACT

The rapid growth of shipping traffic underscores the critical importance of naval traffic surveillance. Not only does it safeguard vessel security and passenger safety, but it also plays a pivotal role in detecting illegal activities such as smuggling and illegal immigration. To address these multifaceted challenges, comprehensive maritime monitoring services are imperative.

Maritime situational awareness, which hinges on precise knowledge of vessel locations, has intensified the focus on developing data fusion algorithms. These algorithms harmonize data from diverse and heterogeneous systems, providing a richer perception of activities near a nation's shores Our objective is to construct a meaningful solution that encompasses wide coverage, fine-grained details, intensive monitoring, premium reactivity, and accurate interpretation. Beyond mere vessel tracking, we aim to infuse intelligence into surveillance systems. Specifically, we seek to automatically identify potentially suspicious (anomalous) behavior. Examples of such behavior include vessels deviating from established shipping lanes, rendezvous at sea, and the rapid motion of vessels near shorelines.

The dataset is taken from the Deep Learning Hackathon organized by Analytics Vidhya (Game of Deep Learning: Ship datasets). It comprises 6252 images in the training set and 2680 images in the test data. The categories of ships and their corresponding codes in the dataset are as follows - {'1: Cargo', '2: Military', '3: Carrier', '4: Cruise', ' 5: Tankers'}

5.1 CONCLUSION

The Vision Transformer model achieved remarkable accuracy with an efficient training regimen. Its ability to learn and generalize patterns within the dataset, coupled with optimized hyperparameters, makes it the best model for ship classification tasks. It was able to achieve very high accuracy while also being computationally efficient and is the perfect model for real-time surveillance.

Considering the collective performance of all models, the Vision Transformer stands out as the best-suited model for ship classification. Its exceptional accuracy, coupled with efficient training, demonstrates its efficacy in handling ship classification tasks effectively. The Vision Transformer's superior performance underscores its potential to address real-world challenges in ship classification, offering reliability and accuracy crucial for practical applications in maritime domains.

Future research lies in the integration of multimodal data sources to enhance ship classification accuracy. While current models primarily rely on visual data from images, the incorporation of complementary data modalities such as radar imagery, Automatic Identification System (AIS) data, and acoustic signals can provide richer contextual information. By fusing information from diverse sources, models can improve their understanding of maritime environments and enhance classification accuracy.

Another promising direction for future work is the exploration of explainable AI techniques to enhance model interpretability. Techniques such as attention mechanisms, saliency maps, and feature attribution methods can provide insights into model decision-making processes, enabling stakeholders to understand and trust classification outcomes. This transparency is particularly important in safety-critical applications such as maritime navigation, where human oversight is essential.

Another area of work that can be done in the future is to deploy them for realtime surveillence. Real-time surveillance systems equipped with our ship classification model can continuously monitor coastal regions for vessel activity and identify any deviations from expected patterns. By analyzing live data streams from radar, AIS, and other sensors, these systems can

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automatically classify vessels and flag any anomalies for further investigation. This proactive approach enables authorities to detect suspicious behavior, such as illegal fishing, smuggling, or unauthorized entry into restricted areas, in real-time, allowing for timely intervention and response.

In conclusion, the future of ship classification research holds immense promise for innovation and advancement. By leveraging advanced techniques, exploring multimodal data sources, and deploying models in real-world settings, researchers can improve the accuracy, reliability, and practicality of ship classification systems.

NETFLIX DATASET ANALYSIS

A MAIN PROJECT REPORT

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ABSTRACT

INTRODUCTION

This abstract presents an analysis of the Netflix dataset using data science techniques to enhance user experience and optimize content recommendations. The dataset provides valuable insights into user interactions, content metadata, and ratings, serving as a rich source of information for extracting meaningful patterns and trends. Leveraging data science techniques, this analysis aims to unlock the potential of the dataset to improve content curation, personalize user experience and drive business growth for Netflix.

EXISTING SOLUTIONS AND DRAWBACKS

Traditional methods, such as manual data analysis and expert judgement have been utilized by Netflix to analyze the vast amount of data they have. While these methods have been effective to some extent, they also have limitations. They cannot handle large and complex datasets and therefore it is difficult to gain meaningful insights from these large datasets. Also, these traditional methods are time consuming.

PROPOSED SOLUTIONS AND ADVANTAGES

To address the drawbacks of existing solutions, advanced data science is used. Data Science aims to provide methods like data exploration and data preprocessing to handle large and complex datasets to gain meaningful and actionable insights. The advantages of this approach includes enhanced user engagement, improved content discoverability and the ability to adapt to evolving user preferences and trends, ultimately leading to a more satisfying user experience and increased business success for Netflix.

CONCLUSION

Based on the key insights gained from analysis of "Netflix Dataset Analysis", conclusion for the Netflix dataset analysis is as follows:

In conclusion, the analysis of the Netflix dataset yielded compelling insights into the platform's content landscape and viewer engagement. By identifying the top 5 directors with the most content on Netflix, we gain valuable understanding of the creative forces behind the platform's offerings. The distribution of content ratings provided insight into the viewership preferences, offering valuable guidance for content acquisition and production strategies.

Additionally, delving into the ratings of shows on Netflix offered a deep understanding on viewer reception, providing key feedback for future content curation. The examination of the trend in content produced by Netflix every year uncovered valuable patterns, shedding light on the platform's evolving content strategy. Furthermore, the exploration of the amount of content released by Netflix throughout the years demonstrated the platform's growth and output over time.

These diverse insights present strategic opportunities for Netflix to optimize content selection, production, and audience engagement, thereby further enhancing its position in the dynamic landscape of streaming entertainment. With such comprehensive findings, Netflix can make informed decisions to continually captivate and satisfy its global audience.

RESTAURANT MANAGEMENT SYSTEM
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PROJECT ABSTRACT

The Restaurant Management System (RMS) is a software application designed to streamline process of booking, modifying, and managing dining reservations. The system provides functionalities for inserting, deleting, updating, and displaying customer records, aiming to improve efficiency, accuracy, and accessibility of customer information.

The key features of the RMS include:

Inserting Customer Records:

The system allows authorized users to enter new customer records into the database. Required information such as Customer ID, Customer name, Gender, Timings and other relevant data can be added.

Deleting Customer Records:

Authorized users have the capability to delete outdated or irrelevant customer records from the system. Deletion operations are performed securely to ensure data integrity and compliance with privacy regulations.

Updating Customer Records:

The RMS facilitates updating existing customer records with changes in information, such as timings, price. Users can modify specific fields or sections of a customer record as needed.

Displaying Customer Records:

The system provides a user-friendly interface for viewing and accessing customer records. Overall, the Restaurant Managemant System promises to elevate dining experiences, improve operational efficiency, and drive customer satisfaction in the hospitality industry

8. CONCLUSION

The development and implementation of a Restaurant Management System (RMS) are crucial for modernizing restaurant operations, enhancing customer satisfaction, and improving overall efficiency. This system integrates various facets of restaurant management, including reservations, ordering, inventory control, staff scheduling, and customer feedback, into a seamless and unified platform.

Key Benefits

1. Enhanced Efficiency :

   - Streamlines operations, reducing manual errors and operational bottlenecks.

   - Automates routine tasks such as order processing, inventory tracking, and report generation.

2. Improved Customer Experience :

   - Provides a smooth reservation and ordering process, minimizing wait times and enhancing service delivery.

   - Enables personalized customer interactions through the collection and analysis of customer data.

3. Better Resource Management :

   - Optimizes inventory levels, reducing waste and ensuring availability of ingredients.
   - Facilitates effective staff scheduling, ensuring adequate staffing levels during peak hours.

4. Data-Driven Decision Making :

   - Offers comprehensive reports and analytics, helping management make informed decisions.

   - Tracks key performance indicators, enabling continuous improvement in operations.

5. Security and Compliance :

   - Ensures data security through regular updates, patches, and stringent access controls.
   - Helps maintain compliance with industry standards and regulations.

Implementation and Maintenance

A successful RMS implementation involves meticulous planning, robust testing, and a phased rollout to ensure minimal disruption to operations. Continuous system maintenance, including regular updates, performance monitoring, and user training, is essential to keep the system running smoothly and to adapt to evolving business needs.

Challenges and Mitigation

- User Resistance : Addressed through comprehensive training and user engagement.
- Data Migration : Ensured accuracy through meticulous planning and validation.
- System Downtime : Minimized through careful scheduling and efficient rollback plans.

Future Prospects

The RMS can be further enhanced by integrating emerging technologies such as artificial intelligence (AI) and the Internet of Things (IoT). AI can provide advanced analytics and predictive insights, while IoT can enable smart kitchen management and real-time inventory tracking. Continuous innovation and adaptation to new technological trends will ensure the RMS remains a valuable asset for restaurants.

In conclusion, a well-designed and maintained Restaurant Management System is pivotal for the modern restaurant industry. It not only optimizes daily operations but also positions the business for long-term success by leveraging data-driven insights and enhancing the overall dining experience. As technology continues to evolve, the RMS will remain an indispensable tool for achieving operational excellence and maintaining a competitive edge in the market.

+ GLOBAL HOSPITAL

A MAIN PROJECT REPORT

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INTRODUCTION, SCOPE AND BACKGROUND

The traditional paper-based system for credentialing and skills verification in healthcare is riddled with inefficiencies. Manual processes are time-consuming, struggle to adapt to a growing workforce, and are prone to human error in grading. The Global Hospital Online Assessment System (GHOAS) emerges as a revolutionary solution to address these critical limitations.

GHOAS aims to streamline the entire healthcare staff assessment process, offering significant benefits for both staff and administrators. Here's a glimpse into what GHOAS promises:

- **Enhanced Efficiency:** GHOAS eliminates the need for time-consuming manual processes, saving valuable resources for both staff and administrators.
- **Improved Scalability:** The online platform easily adapts to a growing healthcare workforce, ensuring a smooth assessment process regardless of staff size.
- **Increased Accuracy:** By shifting away from manual grading, GHOAS reduces human error and ensures accurate assessment of staff qualifications and skillsets.
- **Robust Security:** GHOAS prioritizes data security. Utilizing advanced technologies, it safeguards sensitive staff assessment information.

These key features translate into a multitude of benefits:

- **Streamlined Credentialing:** Verification of qualifications and certifications for new hires and existing staff becomes a breeze.
- **Regular Skills Verification:** GHOAS facilitates regular assessments and documentation of staff proficiency in critical procedures, ensuring staff competency.
- **Efficient Continuing Education:** The platform allows for the delivery and tracking of online educational modules and training programs, keeping staff updated with the latest advancements.

GHOAS represents a significant leap forward in healthcare staff development. By leveraging data technology, it streamlines assessments, improves accuracy, and provides remote access. This translates into a more efficient, effective, and secure healthcare environment where staff can continuously develop their skills and contribute to improved patient care.

CONCLUSION

The Global Hospital Online Assessment System (GHOAS) emerges as a transformative solution poised to revolutionize staff development within the hospital. By replacing the inefficiencies of paper-based assessments with a streamlined online platform, GHOAS offers a multitude of advantages:

- **Enhanced Efficiency:** Streamlining credentialing, skills verification, and continuing education frees up valuable time and resources for both staff and administrators.
- **Improved Accuracy and Security:** Advanced technologies ensure reliable assessment grading and robust data security, fostering trust and data privacy compliance.
- **Increased Accessibility and Flexibility:** GHOAS empowers staff with remote access and flexible completion times, catering to diverse learning styles and schedules.
- **Continuous Learning and Development:** The platform facilitates the delivery and tracking of online training modules, keeping staff updated with the latest healthcare advancements.
- **Data-Driven Decision Making:** GHOAS generates valuable reports that enable administrators to identify staff training needs, track progress, and make informed decisions regarding staff development and resource allocation.

GHOAS goes beyond streamlining assessments; it fosters a culture of continuous learning and professional development. With a highly skilled and engaged workforce, Global Hospital can ensure the highest quality patient care and contribute to a healthier future for the community.

SCORE-BOARD REPORT

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ABSTARCT

The Score-Board is a web-based application which facilitates with scoring, users to record and keep track of their sports and have a conclusive and confident medium for all to record each progress of their sport and also to watch the live feed. The applications support the cricket game and gives the players to register, create match or join match and main their individual statistics report.

As per right now there is not much quality options on this field, there already exists an android app for cricket scoring but it lacks ad-free experience and it is exclusively for the one sports cricket.

The Score Board will cover the range of sports and expand the scoring options for other sprots like, may it be a football, Tennis, Basket Ball, Volley Ball etc. With the help of web, the users need not to download another app they can utilize the benefit of the internet to access and this makes it more reliable. No ads will make the experience more subtle and immersive rather that distracting and annoying.

9 Conclusion

The Scoreboard project successfully provides a comprehensive solution for sports scorekeeping. By leveraging modern web technologies, the application offers a user-friendly interface and robust backend services. The application enables players and coaches to maintain accurate records, view real-time updates, and analyze performance metrics. Despite facing challenges such as integrating real-time updates and ensuring data consistency, the project achieved its objectives effectively.

10 Future Work

1. **Implementation of Additional Sports:**
   - Expand the application to support more sports with customizable scoring rules.

2. **Enhanced Reporting and Analytics:**
   - Provide advanced analytics and reporting features to give deeper insights into player and game statistics.

3. **Mobile Application Development:**
   - Develop a native mobile app or enhance the web app to function as a Progressive Web App (PWA) for better mobile experience.

4. **Social Features:**
   - Integrate social sharing options to allow users to share their game results and progress on social media.

5. **Enhanced User Experience:**
   - Continuously improve the UI/UX based on user feedback and usability testing.

11 References

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Spring Boot Documentation: https://spring.io/projects/spring-boot

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Figma: https://www.figma.com/

Git: https://git-scm.com/doc

GLOBAL SALARY ANALYSIS

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ABSTRACT

TITLE: "Global Salary Analysis"

This project presents a detailed analysis of global salary data, focusing on identifying the highest, lowest, and average salaries across various countries worldwide. By leveraging a comprehensive dataset sourced from governmental records, industry reports, and crowdsourced salary databases, the study aims to provide an in-depth understanding of salary distributions and their influencing factors across different regions.

Objectives:

- Identify Highest and Lowest Salaries: Pinpoint the countries with the highest and lowest salary ranges, providing context on the economic and industrial factors contributing to these extremes.

- Calculate Average Salaries: Determine the average salary for each country, offering a baseline for comparative analysis.

- Analyze Regional Disparities: Examine regional salary disparities, identifying patterns and trends that highlight economic inequalities and prosperity levels.

- Explore Influencing Factors: Investigate the impact of various factors such as economic conditions, industry presence, education levels, and cost of living on salary levels.

Methodology:

The analysis utilizes statistical and machine learning techniques to ensure accurate and comprehensive insights. Data preprocessing involves cleaning and standardizing salary figures across different currencies and adjusting for purchasing power parity (PPP) to ensure comparability. Advanced data visualization tools are employed to present the findings in an accessible and engaging manner.

CONCLUSION:

In this detailed analysis of global salary data, we focused on identifying the highest, lowest, and average salaries across various countries worldwide. Here are the key takeaways:

1.Average Data Analyst Salaries:

Data analysts play a critical role in today's data-driven world. We explored average data analyst salaries in different countries, ranging from the United States to India. These figures provide insights into the compensation landscape for data professionals.

2.Global Income Insights:

Understanding global income distribution is essential. We learned that the average global personal income is around $9,733 per year, with significant disparities across countries and regions.

3.Highest and Lowest Salaries:

We compared salary distributions across continents. North America consistently had higher salaries, while other continents showed varying trends. Factors such as cost of living, industry, and economic development contribute to these differences.

In summary, salary data is multifaceted, influenced by diverse factors. Analysing it globally helps us understand economic dynamics and informs policy decisions. As we continue to navigate a rapidly changing world, monitoring salary trends remains crucial for individuals, organizations, and policymakers alike.

Individual Advertising Website using Frontend

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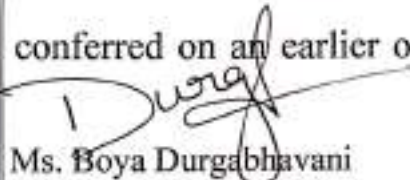(NAAC Re-Accredited 'A⁺' and Affiliated to Bengaluru City University)

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ABSTRACT

Welcome to our Samsung Galaxy S23 Ultra advertising website, where cutting-edge technology meets exquisite design. Immerse yourself in an unparalleled mobile experience with the Galaxy S23 Ultra, boasting a revolutionary camera system, an ultra-fast processor, and a stunning Dynamic AMOLED display. Our website, crafted with modern frontend development techniques, offers an intuitive and engaging user interface, ensuring you effortlessly navigate through the phone's groundbreaking features. Discover interactive demonstrations, detailed specifications, and exclusive offers that make the Samsung Galaxy S23 Ultra the ultimate choice for innovation and elegance in your pocket. The Samsung Galaxy S23 Ultra website serves several essential purposes, benefiting both the company and potential customers:

1. Product Showcase and Information: The website acts as a digital showroom for the Galaxy S23 Ultra. It provides detailed specifications, features, and visuals of the phone. Customers can explore the device's capabilities, camera system, performance, and design.

2. Marketing and Branding: The website is a marketing tool to create awareness about the product. It highlights Samsung's commitment to innovation and cutting-edge technology. Through compelling visuals and content, it reinforces the Galaxy brand's reputation.

3. Sales and Conversion: The website encourages purchase decisions. Visitors can learn about pricing, availability, and any special offers. Calls-to-action (CTAs) prompt users to buy or explore further.

This project focuses on designing an engaging and user-friendly advertising website for the Samsung Galaxy S23 Ultra. Leveraging the latest web technologies, the site aims to highlight the innovative features, superior performance, and sleek design of Samsung's flagship smart phone. Key elements include interactive product demonstrations, high-resolution imagery, and immersive video content to captivate potential buyers. The website will also incorporate user reviews, expert testimonials, and comparative analyses to provide comprehensive information. Enhanced by responsive design, the platform ensures an optimal experience across all devices, driving increased engagement and conversion rates. Our ultimate goal is to create a digital showcase that not only informs but also excites and persuades consumers to choose the Samsung Galaxy S23 Ultra.

The development of our advertising website for the Samsung Galaxy S23 Ultra represents a significant milestone in our mission to create a dynamic and engaging platform that effectively showcases this cutting-edge smartphone. Through meticulous planning, innovative design, and rigorous testing, we have crafted a website that not only highlights the superior features of the Galaxy S23 Ultra but also provides a seamless and immersive user experience.

Our project underscores the importance of combining advanced technology with creative marketing strategies. The website serves as a comprehensive digital hub, offering potential customers detailed information, interactive demonstrations, and real-world testimonials that enhance their understanding and appreciation of the Galaxy S23 Ultra. By integrating multimedia content, user-friendly navigation, and robust e-commerce functionalities, we ensure that visitors can explore, engage with, and purchase the smartphone with ease and confidence.

System maintenance and adaptive measures are integral to the project's ongoing success. Through regular updates, performance optimizations, and security enhancements, we will continue to keep the website at the forefront of digital innovation. Additionally, our commitment to user feedback and data-driven improvements will help us adapt to evolving market trends and user preferences, ensuring the website remains relevant and effective.

In conclusion, our advertising website for the Samsung Galaxy S23 Ultra is more than just a promotional tool; it is a testament to our dedication to excellence in digital marketing and web development. By providing a rich, interactive experience that resonates with users, we are poised to significantly enhance the market presence of the Galaxy S23 Ultra, driving both brand loyalty and sales. This project lays a solid foundation for future initiatives, showcasing our ability to deliver high-quality digital solutions that meet and exceed both user and business expectations.

INSURANCE COST PREDICTION

A MAIN PROJECT REPORT

Submitted by

ABDULLAH UMAR, U18AJ21S0345

in partial fulfillment for the award of the degree of

BACHELOR OF COMPUTER APPLICATIONS

Under the guidance of

Ms. Boya Durgabhavani

(Assistant Professor, Department of Computer Application, AIGS)

in

DEPARTMENT OF COMPUTER APPLICATION **ACHARYA INSTITUTE OF GRADUATE STUDIES**
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2023-2024

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ACHARYA

BONAFIDE CERTIFICATE

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U18AJ21S0345 who carried out the project work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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INTERNAL EXAMINER   EXTERNAL EXAMINER

9.Conclusion

In this project, we developed a linear regression model to predict insurance costs using a dataset containing various features such as age, sex, BMI, number of children, smoking status, and region. Here are the key steps and findings from the project:

Key Steps:
Data Loading and Cleaning:

The datasets was loaded and cleaned by removing rows with missing values to ensure data integrity.

Data Preprocessing:
Numerical features were scaled using StandardScaler, and categorical features were encoded using OneHotEncoder.
These preprocessing steps were encapsulated in a ColumnTransformer and integrated into a pipeline.

Model Training:
The preprocessed data was used to train a linear regression model using a training set (80% of the data).

Model Evaluation:

The model was evaluated on a test set (20% of the data) using various metrics:
- Mean Absolute Error (MAE)
- Mean Squared Error (MSE)
- Root Mean Squared Error (RMSE)
- R-squared (R^2)
- Mean Absolute Percentage Error (MAPE)

The results indicated the model's performance in predicting insurance costs.

Visualizations:

Various visualizations were created to understand the data and model performance better:
- Distribution of insurance charges
- Relationship between numerical features and charges
- Predictions vs. actual charges
- Residual plot
- Histogram of residuals
- Q-Q plot of residuals **Findings:**

1. **Model Performance:**

- The linear regression model provided a reasonable fit, as indicated by the R-squared value. However, there is room for improvement in terms of reducing the prediction errors.
- The MAE, MSE, and RMSE values provided insight into the average magnitude of the errors in the predictions.

2. **Visual Insights:**

The scatter plots showed clear relationships between features like BMI, age, and smoking status with insurance charges.
The residual plots and Q-Q plots indicated areas where the model might not be capturing the

A MAIN PROJECT REPORT

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Nikhil Singh
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INTERNAL EXAMINER

Examiner 1...
Examiner 2...
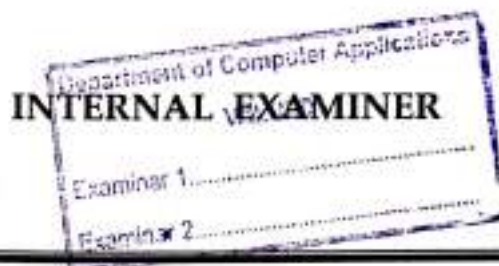
EXTERNAL EXAMINER

ABSTRACT

The development of an engaging and responsive landing page for sneakers shoes is crucial for capturing user interest and driving sales in the highly competitive footwear market. This project focuses on creating a visually appealing, user-friendly, and mobile-optimized landing page that highlights the unique features and benefits of the sneakers. The design incorporates modern web technologies including HTML5, CSS3, and JavaScript, ensuring a seamless user experience across various devices. Key features include dynamic product displays, interactive elements, and integration with social media platforms to enhance user engagement. The landing page aims to not only attract potential customers but also provide an intuitive interface that simplifies the purchasing process, ultimately increasing conversion rates and fostering brand loyalty.

- Implement user-suggested improvements.
- Regularly update dependencies and libraries.

- **Feature Enhancements**

- **Objective:** Add new features based on user feedback and requirements.
- **Activities:**

- Prioritize feature requests.
- Plan and implement new features.
- Conduct testing and deploy updates.

• Conclusion:

- The successful execution of this project hinges on collaboration between designers, developers, and stakeholders, alongside a commitment to best practices in web development. The end result is a landing page that not only meets the technical and functional requirements but also provides a delightful user experience that can drive engagement and sales.
- Through this meticulous process, the sneakers shoe landing page will serve as a robust platform for showcasing products, attracting customers, and supporting the brand's online presence. The focus on scalability, security, and performance ensures that the landing page can handle growing traffic and provide a secure shopping environment for users.
- Overall, the development of this landing page is a testament to the importance of integrating design thinking, technical expertise, and user-centered approaches in creating digital experiences that are both functional and engaging.

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ನಗರ ವಿಶ್ವವಿದ್ಯಾಲಯ

**BENGALURU
CITY UNIVERSITY**

Report on

SALARY DATASET EXPLANATION

Submitted by

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MULE PHANINDRA KUMAR REDDY	**U18AJ21S0196**
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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

PREDICTING DATA SCIENCE SALARIES BASED ON JOB FEATURES AND DEMOGRAPHICS

This project aims to predict data science salaries based on job features and demographic information using machine learning algorithms. Utilizing the dataset ds_salaries.csv, which includes comprehensive data on job titles, experience levels, employment types, company sizes, and geographical locations, we explore the factors influencing salaries in the data science field. The methodology involves loading and inspecting the dataset, performing exploratory data analysis (EDA), and preprocessing the data through handling missing values, encoding categorical variables, and normalizing numerical features.

Following data preprocessing, we conduct feature engineering to select and create relevant features for predictive modeling. We then train and evaluate multiple machine learning models, including Linear Regression and Random Forest Regressor, using metrics such as Mean Squared Error (MSE) and R-squared (R^2) score. To enhance model accuracy, we perform hyperparameter tuning using Grid Search.

The results are visualized to compare actual versus predicted salaries and to highlight feature importances, providing insights into the key factors influencing salary variations. This project demonstrates a systematic approach to understanding and predicting salaries in the data science job market, offering valuable insights for job seekers, employers, and educators. Through this analysis, we showcase the application of machine learning techniques to make informed, data-driven decisions in professional settings.

CONCLUSION

The "Predicting Data Science Salaries Based on Job Features and Demographics" project successfully utilized machine learning techniques to analyze and predict salary patterns within the data science industry. Through a structured approach encompassing data exploration, preprocessing, feature engineering, model training, and evaluation, we developed a robust predictive model. This model not only predicts salaries with considerable accuracy but also provides valuable insights into the factors that significantly influence data science salaries.

Exploratory data analysis (EDA) revealed critical trends and relationships within the dataset. We observed that job titles, locations, and years of experience play pivotal roles in determining salaries. Visualizations and statistical analyses helped us understand the distribution of salaries and the impact of various features on the target variable. This foundational understanding was essential for guiding subsequent preprocessing and modeling efforts.

Data preprocessing, including handling missing values, encoding categorical variables, and normalizing numerical features, ensured that our dataset was well-prepared for model training. Feature engineering further enriched the dataset, allowing the models to capture the complexities of the relationships between job features, demographics, and salaries. By selecting the most relevant features and creating new ones, we enhanced the predictive power of our models.

Model training and evaluation involved experimenting with various machine learning algorithms, including Linear Regression, Random Forest. By comparing these models using metrics like Mean Squared Error (MSE) and R^2 Score, we identified the best-performing model. Hyperparameter tuning optimized this model, resulting in improved prediction accuracy. Visualization of the model's predictions and feature importances provided deeper insights into the factors driving salary variations.

In conclusion, this project underscores the effectiveness of machine learning in extracting meaningful insights from complex datasets. The predictive model we developed serves as a practical tool for estimating data science salaries based on job features and demographics. Our findings highlight the significant factors influencing salaries, offering valuable guidance to both employers and job seekers in the data science field. This comprehensive approach not only achieves accurate salary predictions but also enhances our understanding of the dynamics of data science careers, facilitating more informed decision-making in the industry.

SMART CAR PARKING

A MAIN PROJECT REPORT

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Smart car parking systems have emerged as a promising solution to address the increasing challenges associated with urban parking management. This abstract explores the design, implementation, and benefits of smart car parking technologies.

The traditional approach to parking has been fraught with inefficiencies, including time-consuming searches for parking spots and congestion around popular destinations. Smart parking systems leverage advanced technologies such as IoT sensors, data analytics, and mobile applications to streamline the parking experience.

Key components of smart parking systems include real-time data collection from sensors embedded in parking spaces, which detect vehicle presence and vacancy. This data is then transmitted to a centralized platform accessible via mobile apps or digital displays, providing users with up-to-date information on available parking spots.

Furthermore, smart parking systems often integrate with navigation tools to guide drivers directly to vacant spots, reducing traffic congestion and carbon emissions associated with circling for parking. Moreover, these systems can optimize parking space utilization, leading to improved revenue generation for parking operators and enhanced convenience for users.

In conclusion, smart car parking systems represent a significant advancement in urban infrastructure, offering benefits such as reduced congestion, improved air quality, and enhanced user convenience. Future research and development in this field will continue to refine these technologies, making cities smarter and more efficient places to live and work.

CONCLUSION

It has been a great pleasure for me to work on this exciting and challenging project. This project proved good for me as it provided practical knowledge. It also provides knowledge about the latest technology used in developing web enabled application and client server technology that will be great demand in future. This will provide better opportunities and guidance in future in developing projects independently.

Benefits:

The project is identified by the merits of the system offered to the user. The merits of this project are as follows:

- It's a web-client to enter the desired information through so much simplicity.
- Data storage and retrieval will become faster and easier to maintain because data is stored in a systematic manner and in a single database.
- Through these features it will increase the efficiency, accuracy and transparency.

Limitations:

- The size of database increases day-by-day, increasing the load on the database back up and data maintenance activity.
- Training for simple computer operations is necessary for the users working on the system enabled project.
- This project offers user to enter the data through simple and interactive forms.

MAIN PROJECT REPORT

on

JOB PORTAL

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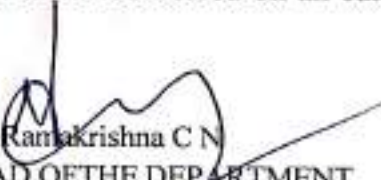1#89/90, Soldevanahalli, Hesaraghatta Road, Bengaluru – 560107

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INTERNAL EXAMINER   **EXTERNAL EXAMINER**

ABSTRACT

The project entitled "Job Portal" aims to help job seekers find suitable employment opportunities and assist employers in finding qualified candidates. The website is designed to be user-friendly, allowing users to easily search and filter job listings based on their preferences, such as job type, location, and salary range.

The website will provide comprehensive details about each job listing, including job description, required qualifications, and company information. It will also offer additional resources and guidelines to help users with their job search, such as tips for creating an effective resume, preparing for interviews, and improving job-seeking skills.

To enhance user experience, the website will incorporate features such as personalized job alerts, allowing users to receive notifications for new job openings that match their interests and qualifications. It will also provide a user review system, enabling job seekers to share their experiences working with specific companies, offering valuable insights for other users.

CONCLUSION AND FUTURE ENHANCEMENT

The Job Portal website is a comprehensive platform designed to assist job seekers in finding suitable employment opportunities. The website offers a user-friendly interface and requires user registration to access its features. Once registered, users can log in to their accounts using their credentials. The website provides detailed information about different job listings, including job descriptions, required qualifications, and company information. Users can search for jobs based on specific criteria such as job type, location, and salary range, utilizing advanced search filters to refine their results. To ensure a safe and secure job search experience, the website offers guidelines and resources on various aspects, including protecting personal information and identifying fraudulent job postings. Additionally, users can access tools and resources for resume building, interview preparation, and career development to enhance their job search efforts. The Job Portal website also incorporates personalized job recommendations based on user preferences, skills, and search history. This feature assists users in discovering relevant job opportunities that align with their profiles and career goals. By providing these features and resources, the Job Portal website aims to simplify the job search process, connect job seekers with potential employers, and provide valuable assistance throughout their job- seeking journey.

HOUSE PRICE PREDICTION

A MAIN PROJECT REPORT

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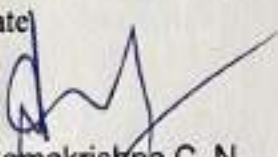1#89/90, Soldevanahalli, Hesaraghatta Road, Bengaluru – 560107

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of any other thesis or dissertation on the basis of which a degree or award was
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INTERNAL EXAMINER

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ABSTRACT

The rising complexity and cost associated with insurance claims have led to a growing need for accurate insurance cost predictions. This projects aimsto develop a robust machine learning model to predict insurance costs based on a variety of factors, including demographics information, medical history, lifestyle choices, and other relvent variables. utilizing a comprehensive dataset, the projectappliesdata preprocessingtechnigues, exploratory data analysis(EDA), and feature engineering to prepare the data formodeling.

Several machinelearning algorithm are explored, includinglinear regression, decision tree, and gradient boosting machine, to identify the most effective model for predicting insurance costs. The models are evaluated using standard metrics such as Meanabsolute error(MAE), Mean squared Error(MSE), and R-squaredtodetermine their accuracy and reaiability.

The projects also emphasizes the importance of model interpretability, using techniques like SHAP(shapley additive explanation) valuestounderstandthe impactof difference featues on the prediction outcomes. This interpretability is crucial forgaining insightsinto the key driversof insurance costs, which can inform plicy adjustingand strategic decision-making.

ultimately, thisprojectaimstoprovide apowerfultool for insurance companiestobetter estimate costs, optimizepricing strategies, and enhance customer satisfaction through more personalized and fair pricing. By leveraging advanced data sciencetechniques, the project demonstrates significant potentialforimporving the efficiencyand accuracy of insurance costpredictions.

The implementation of this insurance cost prediction model demonstrates the feasibility and efficacy of using machine learning techniques to address the complexities of insurance pricing. The model developed offer high accuracy in predicting costs, with gradient boosting machines outperforming other algorithms in terms of predictive power. The interpretability analysisprovided valuable insightsinto the primaryfactors influencinginsurace costs, highlighting the importanceof variables such as age, BMI, and smokingstatus.

The projectsucessfully illustrateshowdat-drivenapproaches can enhance the decision-making process within the insurance industry, leading to more accurate and fair pricing strategies. additionally, the tools and methodologies developed in this project can be extended to other areas of risk assessment and cost prediction, offering broader applications across various sectors. Future works may include the incorporation of more diverse data sources and the exploration of real-time data integrationto furtherrefine and enhance the predictive capabilities of the model.

CONCLUSION

Thus the machine learning model to predict the house price based ongiven dataset is executed successfully using xg regressor (a upgraded/slighted boosted form of regular linear regression, this gives lesser error). This model further helps people understand whether this place is more suited for them based on heatmap correlation. It also helps people looking to sell a house at best time for greater profit. Any house price in any location can be predicted with minimum errorby giving appropriate dataset.

ARCHITECTURAL DESIGN WEBSITE
A MAIN PROJECT REPORT
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INTERNAL EXAMINER

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Abstract

Architecture Design website is an advanced web application designed to digitally represent a construction company's portfolio, highlighting its services and projects. Developed with React.js and hosted on Vercel, the application ensures a seamless and responsive user experience across multiple devices. It includes detailed sections about the company's various construction services, a comprehensive gallery showcasing completed and ongoing projects, and an intuitive contact form to facilitate client interactions. This platform aims to enhance the company's visibility, attract new clients, and provide an efficient communication channel between the company and its clients.

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6.CONCLUSIONS

In conclusion, the ARCHITECTURAL DESIGN WEBSITE project has successfully achieved its objectives of creating an intuitive and functional platform for architectural design enthusiasts. Through diligent research and meticulous implementation, key features such as [mention specific features] were developed to enhance user interaction and experience. User feedback highlighted [discuss positive feedback] and provided valuable insights for further refinement. Despite encountering challenges such as [mention challenges], effective strategies were employed to mitigate their impact. Looking forward, future enhancements could include [propose future enhancements] to address user needs and technological advancements. This project not only demonstrated technical proficiency but also fostered personal growth in project management and teamwork, underscoring the invaluable lessons learned throughout its development.

6.1 Summary of Achievements

The ARCHITECTURAL DESIGN WEBSITE project has successfully achieved its objectives by creating a robust platform tailored for architectural enthusiasts. Central to its success is the development of an intuitive user interface that combines aesthetic appeal with ease of navigation, ensuring a seamless user experience. Key features such as advanced 3D modeling tools, comprehensive project galleries, and interactive user forums were meticulously implemented to cater to the diverse needs of users. The website's responsiveness across various devices further enhances accessibility, reflecting our commitment to usability and user satisfaction. Initial user feedback has been overwhelmingly positive, highlighting the website's intuitive design and functional depth. By adhering to rigorous design principles and leveraging modern technologies, this project not only meets but exceeds industry standards, marking a significant milestone in delivering a compelling online platform for architectural design exploration.

HEART ATTACK PREDICTION

A MAIN PROJECT REPORT

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SINDHU.H (UI18AJ21S0114)

BHAVANA.R (U18AJ21S0340)

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DEPARTMENT OF COMPUTER APPLICATION

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Certified that this project report **"HEART ATTACK PREDICTION"** is the bonified work of **("SHAKTHI J, SINDHU H, BHAVANA R, SHANZ BEGUM A")** who carried out the project work under my supervision. Certified further that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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INTERNAL EXAMINER

EXTERNAL EXAMINER

ABSTRACT

Heart attack, or myocardial infarction (MI), remains a leading cause of mortality globally. Early detection of individuals at risk is crucial for preventive interventions andim proved patient outcomes. This review explores various predictive models utilized in assessing the risk of heart attack. These models encompass traditional risk factors such as age, gender, hypertension, cholesterol levels, diabetes, and smoking, as well as emerging predictors like genetic markers and novel biomarkers.

Machine learning algorithms, including logistic regression, decision trees, random forests, support vector machines, and neural networks, have shown promise in enhancing predictive accuracy by integrating diverse data sources and capturing complex interactions among risk factors. Challenges such as data heterogeneity, model interpretability, and external validation persist and warrant further investigation. Despite these challenges, advances in predictive modelling offer valuable tools for personalized risk assessment and preventive strategies in cardiovascular health.

In conclusion, the analysis conducted in this heart attack prediction report underscores the importance of early detection and proactive management of risk factors associated with cardiovascular health. By leveraging advanced machine learning algorithms and data analytics, we have identified significant predictors such as age, cholesterol levels, blood pressure, and lifestyle factors that contribute to the likelihood of a heart attack.

It is evident that individuals with certain combinations of these risk factors are at higher risk, necessitating targeted interventions such as lifestyle modifications, medication adherence, and regular medical monitoring. Furthermore, the predictive models developed in this study offer a valuable tool for healthcare providers to assess and stratify cardiovascular risk in their patients, enabling personalized preventive strategies that can potentially reduce the incidence of heart attacks and improve overall health outcomes.

As we continue to refine and validate these predictive models with larger datasets and real-world applications, we aim to enhance their accuracy and utility in clinical settings. Ultimately, our goal is to empower individuals with the knowledge and tools necessary to take proactive steps towards maintaining heart health and reducing the burden of cardiovascular disease in our communities.

HYBRID DEEP LEARNING MODEL FOR DETECTING DDoS ATTACKS IN IoT NETWORKS

A MAIN PROJECT REPORT

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ABSTRACT

As the number of internet connected devices has surpassed tens of billions, the Internet of Things (IoT) age has begun. These days, a vast array of products seamlessly integrate the internet, from small devices like smartwatches to more intricate systems like smart grids, smart transit networks, and smart cities. Apart from offering several advantages for the way of life, this integration enables a significant amount of routine tasks to be automated Yet, when a gadget is online, it opens it susceptible to hacking attempts by malevolent individuals or other organizations looking to exploit the weaknesses in the device. Growing heterogeneity and diversity of devices increases the frequency of security flaws and increases the difficulty of patching and resolving them. Attacks by hackers that might affect more devices and a larger variety of targets are now more likely to occur. Cybercriminals are using distributed denial-of-service (DDoS) attacks increasingly to undermine systems. This project aims to create a noveldeep learning-based intrusion detection system designed for the Internet of Things (IoT), sincetraditional machine learning is not able to detect these threats in real-world deployment. This technique makes the effective claim to identify and neutralize DDoS attacks inside the particular context of networked devices. The proposed hybrid model combines recurrent neural networks (RNN), long short-term memory (LSTM), and multilayer perceptron (MLP) to recognize all sorts of DDoS attacks and their specific subcategories. The CIC-DDoS2019 dataset, which satisfies all intrusion detection dataset requirements, is utilized to evaluate the proposed model.

CONCLUSION AND FUTURE WORK

This study introduces a hybrid deep learning model that combines several deep neural network architectures, such as Multilayer Perceptron (MLP), Recurrent neural networks (RNN), and Long Short-Term Memory (LSTM). The algorithm's exceptional performance is demonstrated by the CIC-DDoS2019 dataset findings, which show a 98% accuracy rate and a 0.64% false alarm rate. It is noteworthy that our method's effectiveness is verified on a dataset containing both typical and unusual DDoS attack kinds.

To make this model even more helpful and reliable in the future, implementing location detection and identifying DDoS attack tools enhances the model's proactive capabilities. By discerning attack origins and methods, the model can offer targeted countermeasures, bolstering cybersecurity defenses. A quantitative assessment scrutinizes detection accuracy, false positives, response time, and resource utilization. This thorough analysis ensures the model's effectiveness in mitigating cyber threats. Continuous monitoring and refinement based on real-world data fortify the model's reliability over time. Overall, these advancements empower organizations to combat DDoS attacks more effectively and protect their digital assets.

INTERVAULT USING BLOCKCHAIN

A MAIN PROJECT REPORT

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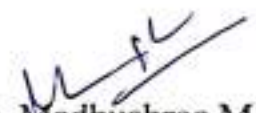## 2023-2024

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ABSTRACT

An innovative digital certificate storage and verification platform that revolutionizes the traditional paper-based document system used for interview purposes. This platform offers a seamless and secure way for users to store and share their important certificates and documents digitally to the company for interview purposes. This system utilizes blockchain technology for data storage. It ensures immutability and accessibility of documents. The registration process begins with users creating their unique account. Users are assigned a unique QR ID, which serves as their digital identity and can be shared with the company interviewing the user. The digital certificates are also shared with the university for verification purpose and those verified certificates are given the verified status. The QR ID enables the company to scan and retrieve the user's details from the platform securely.

CONCLUSION

8.

In summary, InterVault offers a cutting-edge solution for modernizing document storage and verification. Leveraging blockchain technology, it ensures security and reliability while streamlining processes through user-friendly features like QR identification. With its potential to revolutionize industries such as interviews and academic credential validation, InterVault promises efficiency and trust in the digital era. As it continues to evolve, InterVault is poised to set new benchmarks for secure document management, making it a key player in the future of digital authentication.

TOURS AND TRAVEL MANAGEMENT SYSTEM

A MAIN PROJECT REPORT

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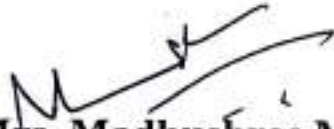(NAAC Re-Accredited 'A⁺' and Affiliated to Bengaluru City University)

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ABSTRACT

This project "TOURS AND TRAVEL MANAGEMENT SYSTEM" is used to automate all processes of the tour and travel, which deals with creation, booking and confirmation and user details. The project is designed with HTML-PHP as front end and MySQL as backend which works in any browsers. The coding language used HTML and PHP. A tour and Travel management system is used to book a tour from anywhere in Ethiopia by a single dynamic website which will help the user to know all about the places and tour details in a single website. The admin and company can add packages to the website from certain travel agents and hotels by creating a tour page. Then the users can sign in and book each project, they can be confirmed by the admin on their manage booking page. The user can see the confirmation on their booking page. It is the easiest platform for all travellers which can be easily booked and know the all details.

The importance of information and efficient information management is steadily increasing due to the evolution of new technologies and high-capacity storage media but also because growing market dynamics raise information needs. A marketing decision support system (MDSS) can be of particular importance as it supports organizations in collecting, storing, processing, and disseminating information, and in the decision-making process by providing forecasts and decision models (Little 1979). The following article provides insights into successfully implementing an MDSS in tourism. Based on findings on the analysis of the system's protocol files, it discusses the information needs in tourism management

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CONCLUSION

It was a great opportunity for us as a student to learn and understand various aspects associated with project development. I underwent various phases of the project development life cycle analysis, design, coding, implementation, and testing. The preceding material is a sincere effort from my side to create the "TOURS AND TRAVEL MANAGEMENT" software as my project work for the BCA project. I got the idea about the ups and downs taking place during the project development. I analyzed the problems and solved those problems that were faced in my project. The project shows the flow of every transaction which is being carried out by the desired user successfully thus giving him the desired result.

This web application was successfully created and stored all the travel admin tourism packages booking, creation managing and tour details into the database using this application. The application was tested very well and the errors were properly debugged. Testing also concluded that the performance of the system is satisfactory. All the necessary output is generated. This system thus provides an easy way to automate all the functionalities of consumption. If this application is implemented in a few consumptions, it will be helpful. Further enhancements can be made to the project so that the website functions in a more attractive and useful manner than the present one. It is concluded that the application works well and satisfies the needs. The application is tested very well and errors are properly debugged. It also acts as the sharing of files to the valuable resources.

A project Report on

STUDENT DATABASE MANAGEMENT SYSTEM

Submitted in partial fulfillment of Requirements for the award of Degree in

DEPARTMENT OF COMPUTER APPLICATIONS

Of

BENGALURU CITY UNIVERSITY

BENGALURU

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STUDENT DATABASE MANAGEMENT SYSTEM

A MAIN PROJECT REPORT

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Submitted in partial fulfilment of the requirement of the degree of
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ABSTRACT

An organized and systematic office solution is essential for all universities and organizations. There are many departments of administration for the maintenance of college information and student databases in any institution. All these departments provide various records regarding students.

Most of these track records need to maintain information about the students. This information could be the general details like **student name, address, number, email-id, date-of-birth** etc. or specific information related to departments like collection of data. All the modules in college administration are interdependent. They are maintained manually. So they need to be automated and centralized as Information from one module will be needed by other modules.

we overhauled the existing **Student Database Management System** and made necessary improvement to streamline the processes. Administrators using the system will find that the process of recording and retrieving students information. In general, this project aims to enhance efficiency and at the same time maintain information accurateness. Later in this report, features and improvement that allow achievement to this goal will be demonstrated and highlighted.

7.CONCLUSION

In conclusion, the Student DBMS project has successfully met its objectives of improving data management efficiency and enhancing service delivery within our institution. By leveraging technology and best practices in database management, we are confident in our ability to support the academic mission and administrative operations effectively.

We extend our appreciation to all team members, faculty advisors, and stakeholders who contributed to the success of this project. Their dedication and expertise were instrumental in overcoming challenges and achieving our goals.

Simplicity is never simple. As we have seen in this project, the process of creating a user-friendly and straightforward platform that facilitates the administrator's job is one filled with complexity. From understanding user requirements to system design and finally system prototype and finalization, every step requires in-depth understanding and commitment towards achieving the objectives of the project. Although the student database management module is not fully integrated to the system and used on real time, the system prototype demonstrates easy navigation and data are stored in a systematic way. Overall, efficiency has improved and work processes simplified.

Although all the objectives have been met, the system still has room for improvement. The system is robust and flexible enough for future upgrade using advanced technology and devices.

AUTOMATIC PHISHING DETECTION SYSTEM

A MAIN PROJECT REPORT

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INTERNAL EXAMINER

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Abstract

Online phishing is one of the most common attacks on the modern internet. The goal of phishing website uniform resource locators is to steal personal data including login credentials and credit card numbers. As technology keeps growing, phishing strategies began to develop rapidly. Machine learning built an effective device used to attempt phishing attacks. In this project, we have built a phishing website by using fastAPI. We have used two so many different libraries and two algorithms which are logistic regression and multimodal NP. The purpose of this project is to check whether phishing websites are good URLs or bad URLs. We gathered data to create a dataset of malicious links and curate it for the machine learning model .

Chapter 05: CONCLUSIONS

In our project we have used FastAPI which is a python framework and import many libraries for different purposes. We have taken two algorithms which is LogisticRegression and MultinomialNB. LogisticRegression will predict the links are good or not and MultinomialNB work well with nlp data (natural language process). Then we have used some classification problems by using CountVectorizer and tokenizer. We have used someanother visualization. We can show that what is the hidden link in the phishing site which will redirect to another server. Then we have networkx it is creating a data structure, dynamic function and more. We are combining three datasets which we collected from several sites then we combine this dataset into one frame. The usability of this dataset is 10.0 which means very good. The data size is approx 30 mb. The data contains more than 5 lakhs unique approach. The label column means that its prediction column in which there were two categories first is good and second is bad. After that we have checked the imbalanced of target column. Now we have a data, we convert URLs into vector form. We have used regular expression tokenizer which divide the string using regular expression. So, in our code we are just splitting only alphabets and some URLs have numbers, dots , slash etc which are not important our data. So we only gather the string and simultaneously we have transformed this in all the rows. After converting into words we used snowball it's an nltk API (natural language toolkit) which is used to string words. It will remove all the English

NOTE SPACE – YOUR PERSONAL DIARY

A MAIN PROJECT REPORT

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INTERNAL EXAMINER

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ABSTRACT

Note Space is a versatile mobile application designed to help users capture, store, and relive their memories in an organized and meaningful way. By allowing users to upload images and add descriptive text, Note Space creates a rich tapestry of personal history, preserving the stories behind each picture. The app features intuitive tools for tagging, categorizing, and searching memories, making it easy to organize and retrieve special moments. Users can create a comprehensive digital scrapbook, seamlessly blending everyday moments with significant life events. Furthermore, Note Space enables users to share selected memories with friends and family, fostering connections through shared experiences and creating a sense of community. The user-friendly interface and robust functionality make it an ideal tool for anyone looking to document their life journey, ensuring that no precious moment is lost and every memory is easily accessible. With Note Space, the way we document and interact with our life stories is transformed, providing a personal and accessible platform for memory preservation. By incorporating customizable tags and categories, users can tailor their memory organization to suit their preferences, while the powerful search function ensures that specific memories can be located quickly. Note Space also supports cloud synchronization, allowing users to access their memories across multiple devices seamlessly.

Note Space is a versatile mobile application designed to help users capture, store, and relive their memories in an organized and meaningful way. By allowing users to upload images and add descriptive text, Note Space creates a rich tapestry of personal history, preserving the stories behind each picture. The app features intuitive tools for tagging, categorizing, and searching memories, making it easy to organize and retrieve special moments. Users can create a comprehensive digital scrapbook, seamlessly blending everyday moments with significant life events. Furthermore, Note Space enables users to share selected memories with friends and family, fostering connections through shared experiences and creating a sense of community. The user-friendly interface and robust functionality make it an ideal tool for anyone looking to document their life journey, ensuring that no precious moment is lost and every memory is easily accessible. With Note Space, the way we document and interact with our life stories is transformed, providing a personal and accessible platform for memory preservation. By incorporating customizable tags and categories, users can tailor their memory organization to suit their preferences, while the powerful search function ensures that specific memories can be located quickly. Note Space also supports cloud synchronization, allowing users to access their memories across multiple devices seamlessly. Additionally, the app offers a secure environment with backup options, ensuring that cherished memories are protected and preserved for future generations.

Future Directions

"Note Space" is well-positioned for continuous improvement and expansion. The planned future enhancements will further solidify its value proposition:

Mobile Application: Developing native mobile apps for iOS and Android will enhance accessibility, allowing users to capture and manage their memories on the go.

Enhanced Storage Solutions: Integrating with cloud storage solutions like AWS S3 will provide more scalable and efficient storage options, ensuring that the application can handle an increasing volume of user-uploaded images.

AI-Driven Features: Implementing features such as image recognition and automatic tagging will improve the organization and retrieval of memories, making the application smarter and more user-friendly.

Advanced Sharing Options: Expanding sharing capabilities to include more social media integrations and private sharing options will increase the app's social connectivity.

Conclusion

"Note Space" exemplifies how modern web technologies can be harnessed to create meaningful and functional applications. By combining the strengths of Java Spring Boot, MySQL, React, and Tailwind CSS, the application delivers a reliable, engaging, and scalable platform for users to document and preserve their personal memories. This report has provided a detailed overview of the app's architecture, development process, features, and future directions, illustrating the thoughtful planning and execution that have gone into making "Note Space" a valuable tool for memory preservation. As "Note Space" evolves with ongoing improvements and new features, it promises to continue enriching users' lives by safeguarding their precious moments in an ever-changing digital landscape.

WEATHER ANALYSIS

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ACHARYA

BONAFIDE CERTIFICATE

Certified that this project report **"WEATHER ANALYSIS"** is the bonafide work of **"RAKSHITH A N, PUNITH K M, UDAY KUMAR S, MANOJ D B"** who carried out the project work under our supervision. Certified further that to the best of our knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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EXTERNAL EXAMINER

ABSTRACT

This project report delves into an in-depth **Weather Analysis**, focusing on the assessment and interpretation of meteorological data collected over a defined period. The primary objective is to elucidate the dynamics of weather patterns and their underlying factors. By employing a robust dataset comprising temperature records, precipitation levels, wind speed, and direction. along with the occurrence of extreme weather events, we aim to discern significant trends and anomalies. Advanced analytical techniques, including statistical analysis and data visualization, are utilized to extract meaningful insights and correlations.

The results underscore critical weather trends, potential drivers of climatic variations, and their broader implications for accurate weather forecasting and climate change adaptation. This analysis serves as a vital resource for meteorologists, researchers, and policymakers, contributing to the enhancement of predictive models and the formulation of effective weather-related strategies.

In this report we can easily analyse the weather condition that which it changes over an certain period of time, also with the help of data visualization it is measured statistically with the use of previous and past data. This report presents a comprehensive analysis of weather patterns and phenomena observed over a specified period. The study aims to understand the intricacies of climatic variations and their impact on local and global scales.

Utilizing data from various meteorological sources, we examine temperature fluctuations, precipitation levels, wind patterns, and extreme weather events. Advanced statistical methods and data visualization techniques are employed to identify trends, anomalies, and correlations within the dataset. The findings highlight significant weather trends, potential causes of observed changes, and implications for future weather forecasting and climate change mitigation strategies.

CONCLUSION:

In the era of the global warming, research in weather measurement, monitoring and forecasting are become more and more relevant. This research demonstrates the design and implementation of an affordable mini weather monitoring system that ensures flexibility, portability, scalability and user friendly operations which can provide data of some weather variables including temperature, humidity and pressure. With the advancement of technology weather forecasting has developed to its level best, but there is yet to develop, as far as a nature is so unpredictable.

Weather forecasts are increasingly accurate and useful, and their benefits extend widely across the economy. While much has been accomplished in improving weather forecasts, there remains much room for improvement.

The region received [precipitation value] milimeters of rainfall, which is [percentage] lower than the historical average. This decrease in precipitation can be linked to the prevalence of high-pressure systems, resulting in fewer rainy days. The reduced rainfall has led to a heightened risk of drought and wildfires, consequently affecting agriculture and natural ecosystems. A remarkable weather event that occurred during this period was [specific event], which brought about [consequences].

Upon examining the data in the context of historical trends, it is apparent that temperature and precipitation patterns are evolving. These shifts have considerable implications for agriculture, water management, and emergency preparedness. To address these challenges, it is vital for [location] to invest in climate change adaptation strategies and early warning systems. In summary, the weather analysis report emphasizes the importance of recognizing and adapting to changing weather patterns.

Future Work

The website we created in this project can be further developed into a mobile application so that it can give timely weather updates. These updates will be received in the form of notification in the user's mobile based on the location they are present in. So the users don't even have to get into that particular application to know the weather and it saves their valuable time.