VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA CAMPUS, BELAGAVI-590018

MINI PROJECT REPORT

OF

AIRLINE RESERVATION MANAGEMENT SYSTEM

Submitted by

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Under the Guidance

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Professor & HOD

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2023-24

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Dr.SUDHEER SHETTY
Project Guide

Dr. SUDHEER SHETTY
Head of Department

Abstract

The Airline Reservation System project aims to develop a comprehensive and efficient software system for managing airline reservations. The project's primary objective is to design and implement a file structure that supports the storage and retrieval of airline reservation data. This involves creating an organized and optimized data storage mechanism to handle large volumes of reservation information, such as passenger details, flight schedules, seat availability, and booking records. To achieve this objective, the project adopts a file structure approach, which involves structuring and organizing the data within files and directories. The chosen file structure aims to optimize data access, minimize storage space requirements, and ensure efficient retrieval and modification of reservation data.

Furthermore, the project aims to enhance the overall user experience by implementing intuitive user interfaces and incorporating features such as real-time seat availability updates and secure payment processing. These enhancements will enable customers to easily book flights, select preferred seats, and make payments securely through the system.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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MINI PROJECT REPORT

ON

CHATBOT AI FOR FOOD ORDERING

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Dr . Pradeep V	**Prof . Mounesh K Arkachari**	**Dr . Sudheer Shetty**
Project Guide	**Project Coordinator**	**Head of Department**

ABSTRACT

The advent of artificial intelligence has brought about significant advancements in the development of chatbots, enabling more sophisticated and human-like interactions. This paper presents a comprehensive study on the creation of an AI-based food ordering chatbot aimed at enhancing user engagement and providing accurate, timely responses. The proposed chatbot leverages state-of-the-art technologies, including natural language processing (NLP), deep learning, and machine learning, to improve its ability to understand and respond to user inputs effectively.

The increasing demand for instant and accurate information has led to the widespread use of chatbots across various sectors. However, many existing chatbots suffer from limitations such as poor understanding of user intent, slow response times, and difficulty in handling complex queries. Our research identifies these key challenges and proposes a robust AI-based chatbot model designed to improve user interaction and satisfaction.

The chatbot model incorporates deep feedforward multilayer perceptron networks, enabling it to learn from large datasets and improve response accuracy over time. It is evaluated based on several performance metrics, including response accuracy, time complexity, and user satisfaction. Our findings demonstrate that the chatbot achieves high accuracy rates and minimal computational overhead, making it a practical solution for real-world applications. The study also provides insights into the functionalities and potential applications of AI chatbots, highlighting their role in improving user interaction and operational efficiency.

By presenting this AI-based chatbot model, we aim to contribute to the ongoing advancements in chatbot technology and offer a solution that addresses the limitations of existing systems. This research not only showcases the technical capabilities of the proposed model but also emphasizes its practical value in enhancing user experience across various domains.

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MINI PROJECT REPORT

OF

CROP PREDECTION USING MACHINE LEARNING

Submitted by

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Dr. SUDHEER SHETTY
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ABSTRACT

In the face of climate change and an ever-growing global population, the agricultural sector faces significant challenges in ensuring food security. Traditional farming methods are often insufficient to predict crop yields accurately, leading to inefficiencies and potential crop failures. This project, "Crop Prediction Using Machine Learning," aims to address these challenges by leveraging advanced machine learning algorithms to forecast crop yields more accurately. This study employs a combination of historical agricultural data, weather patterns, soil health metrics, and satellite imagery to build robust predictive models. Various machine learning techniques, including linear regression, decision trees, random forests, and neural networks, are explored and compared to identify the most effective approach for crop prediction.

The model's performance is evaluated based on metrics such as accuracy, precision, and recall, and is further validated through cross-validation techniques. Additionally, the project investigates the impact of different features on crop yield prediction, providing insights into the most critical factors affecting agricultural productivity. The outcomes of this research demonstrate the potential of machine learning in transforming agricultural practices by enabling data-driven decision-making. Accurate crop predictions can assist farmers in optimizing their resources, planning for planting and harvesting, and mitigating the risks associated with adverse weather conditions. Ultimately, this project contributes to the broader goal of enhancing food security and sustainability in agriculture through technological innovation.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
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A PROJECT REPORT ON

DEVELOP AN ETHICAL AND SECURE MACHINE LEARNING FRAMEWORK TO UNCOVER CUSTOMER TRENDS WITHOUT COMPROMISING USER PRIVACY

Submitted in partial fulfilment for the award of Degree of,

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE AND ENGINEERING

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Mr. Mounesh A **Project Guide**	**Mr. Mounesh** **Project Coordinator**	**Dr. Sudheer Shetty** **HOD ISE**

ABSTRACT

This framework addresses the critical need for balancing the extraction of valuable customer insights with stringent privacy protections. By leveraging advanced anonymization techniques, differential privacy, and federated learning, businesses can analyze aggregated data without accessing individual-level information. These methods ensure that customer data remains secure and private, while still enabling the identification of key trends and patterns. The framework also includes comprehensive data governance policies to comply with international regulations and build customer trust. This approach not only mitigates privacy risks but also enhances the credibility and ethical standing of businesses in the eyes of consumers.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

JNANA SANGAMA CAMPUS, BELAGAVI-590018

MINI PROJECT REPORT

ON

INSTAGRAM AUTOMATION

Submitted by

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ACKNOWLEDGEMENT

The satisfaction and euphoria that accompany a successful completion of any task would be incomplete without the mention of people who made it possible, success is the epitome of hard work and perseverance, but steadfast of all is encouraging guidance.

So, with gratitude we acknowledge all those whose guidance and encouragement served as beacon of light and crowned the effort with success.

We thank our project guide **Dr. SUDHEER SHETTY** Associate Professor in Department of Information Science & Engineering, who has been our source of inspiration. He especially enthusiastic in giving his valuable guidance and critical reviews.

We sincerely thank, **Dr. SUDHEER SHETTY**, Head of the department, Department of Information Science & Engineering who has been the constant driving force behind the completion of the project.

We thank our beloved Principal **Dr. PETER FERNANDES**, for his constant help and support throughout.

We are indebted **to Management of Alva's Institute of Engineering and Technology, Mijar, Moodbidri** for providing an environment which helped us in completing our project.

Also, we thank all the teaching and non-teaching staff of Department of Information Science & Engineering for the help rendered.

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ABSTRACT

This Python script uses Selenium WebDriver to automate the liking of posts on Instagram. The automation process involves several key steps: Environment Setup, Login Automation, Search and Navigation, Post Interaction, Error Handling, and considerations for Rate Limiting and Ethics. Proper setup ensures that the script can control a web browser programmatically.

Login Automation involves navigating to the Instagram login page, entering user credentials, and submitting the login form to handle authentication. Once logged in, the script performs a search for posts based on a specified hashtag or user profile and navigates to the search results page where posts are displayed.

In the Post Interaction phase, the script iterates through the posts found in the search results. For each post, it locates the like button and simulates a click to like the post, handling dynamic content to ensure the interaction is performed correctly. Error Handling includes mechanisms to manage potential issues such as missing elements, navigation errors, or login failures, ensuring that the script can handle exceptions and continue execution or provide informative error messages.

Finally, considerations for Rate Limiting and Ethics ensure that actions are performed at a reasonable pace to avoid triggering Instagram’s anti-spam mechanisms or violating terms of service. This thoughtful design ensures the script operates within Instagram's guidelines while achieving its automation goals.

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A PROJECT REPORT ON

PREDICTION OF MACHINE FAILURE

Submitted in partial fulfilment for the award of Degree of,

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IN

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Mr. Pradeep Nayak Project Guide	Mr. Mounesh Project Coordinator	Dr. Sudheer Shetty HOD ISE

ABSTRACT

In the realm of industrial operations, machine failure represents a significant challenge, often leading to costly downtime and maintenance. The advent of data mining techniques offers a promising avenue for predicting machine failures, thereby facilitating proactive maintenance strategies. This study explores the application of data mining methodologies for the prediction of machine failures. By leveraging historical maintenance data, sensor readings, and operational logs, we develop predictive models using algorithms such as decision trees, random forests, and neural networks. Our approach emphasizes the importance of feature selection and data pre-processing in enhancing model accuracy. The results demonstrate that data mining techniques can effectively identify patterns and anomalies indicative of impending machine failures, providing a robust framework for predictive maintenance. This predictive capability not only improves machine reliability and efficiency but also optimizes maintenance schedules, reducing operational costs and minimizing downtime. Future work will focus on integrating real-time data streams and exploring advanced machine learning techniques to further refine prediction accuracy and extend applicability across diverse industrial contexts.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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MINI PROJECT REPORT

OF

QUIZ MASTER : APP DEVELOPMENT

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Project Guide

Dr. SUDHEER SHETTY

Head of Department

ABSTRACT

The Quiz App is an innovative mobile application designed to enhance learning experiences by integrating educational content with modern mobile development technologies. Built using the Flutter framework and Dart programming language, the app offers a seamless and responsive user interface compatible with both iOS and Android platforms. The backend, powered by Firebase, provides robust data management, secure authentication, and real-time updates.

The app features a variety of quiz categories, dynamically generated questions, and multiple question formats to cater to diverse user interests and knowledge levels. It includes real-time score updates and leaderboards to foster a competitive environment, and supports user profile customization and progress tracking. Notifications are used to engage users with daily quizzes and updates.

This project highlights the potential of combining educational content with interactive and competitive elements, leveraging gamification to enhance user engagement and retention. The Quiz App demonstrates the effective use of Flutter and Firebase to build a scalable, user-friendly, and educational mobile application that transforms traditional learning methods into a fun and interactive process.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

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Mini Project Report

On

"RAILWAY RESERVATION MANAGEMENT SYSTEM"

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Mr. Naveen G,	Dr. Sudheer Shetty,
Mini Project Guide	HOD ISE

ABSTRACT

Title: Railway Reservation Management System

The website offers a range of functionalities to assist users in booking their tickets seamlessly. Users can access information such as train availability, exact fare details, and departure and arrival times. Additionally, they can complete their booking using various payment methods including debit, credit, or Mastercard. One of the key features of the system is its flexibility in allowing users to cancel their bookings effortlessly if needed. This adds convenience and enhances the user experience.

The Railway Reservation Management System stands as a cornerstone in the ongoing modernization efforts and operational streamlining within the realm of railway services. This mini-project embarks on the journey of conceptualizing, designing, and implementing an intuitive and robust system that aims to revolutionize the process of railway reservation, catering comprehensively to the needs of both passengers and administrators.

Through meticulous planning and development, the system emerges as a user-friendly platform, empowering passengers with seamless functionalities to effortlessly book tickets, access train schedules, and manage their reservations with utmost convenience. Concurrently, administrators are equipped with powerful tools to efficiently oversee and manage train routes, monitor real-time seat availability, and generate insightful reports that facilitate informed decision-making and system optimization.

The system's core features encompass comprehensive user registration and authentication mechanisms, dynamic seat availability updates, seamless integration with secure payment gateways to facilitate hassle-free transactions, and automated email notifications to keep passengers informed about booking confirmations, cancellations, and other essential updates. As a culmination of innovative technology and meticulous planning, the Railway Reservation Management System endeavours to redefine the landscape of railway ticket booking and management by fostering efficiency, transparency, and unparalleled user satisfaction.

Overall, the Railway Reservation Management System project serves as a practical application of database management concepts in the domain of railway ticketing, providing users with a user-friendly interface and efficient booking and management capabilities.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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MINI PROJECT REPORT

ON

"REAL TIME EMOTION DETECTION"

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Dr. Pradeep V	**Prof. Mounesh K Arkachari**	**Dr. Sudheer Shetty**
Project Guide	**Project Coordinator**	**Head of Department**

ABSTRACT

In recent years, real-time emotion detection has gained prominence due to its diverse applications across various fields such as healthcare, security, and user experience enhancement. This project presents a comprehensive overview of real-time emotion detection technologies, emphasizing the integration of machine learning and computer vision techniques to accurately identify and interpret human emotions as they occur.

The core of real-time emotion detection systems typically involves analyzing facial expressions, voice intonations, and physiological signals. This project explores the effectiveness of different modalities, including facial expression recognition using convolutional neural networks (CNNs), sentiment analysis through natural language processing (NLP), and affective computing leveraging wearable sensors. Emphasis is placed on the use of advanced algorithms to process and classify emotional states with high accuracy and minimal latency.

Key challenges in real-time emotion detection include variability in individual expression, cultural differences, and environmental factors. To address these issues, This project reviews recent advancements in data augmentation, model generalization, and real-time processing techniques. Additionally, it examines the integration of multi-modal data to enhance emotion recognition performance, providing a more robust and nuanced understanding of human affective states.

The project also discusses practical implementations of real-time emotion detection systems, highlighting their impact on applications such as mental health monitoring, interactive gaming, and customer service. Future directions for research include the development of more adaptive algorithms, improved cross- cultural models, and ethical considerations regarding privacy and consent.

Overall, this project underscores the potential of real-time emotion detection technologies to revolutionize human-computer interaction and improve quality of life by providing timely and contextually relevant emotional insights.

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MINI PROJECT REPORT

ON

TEACHER RECORD MANAGEMENT SYSTEM

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Dr. Sudheer Shetty	**Prof. Mounesh K Arkachari**	**Dr. Sudheer Shetty**
Project Guide	**Project Coordinator**	**Head of Department**

ABSTRACT

The Teachers' Record Management System (TRMS) is a sophisticated web-based application developed using PHP and MySQL to streamline and optimize the management of teachers' information, academic records, and performance evaluations in educational institutions. This system provides a user-friendly platform for school administrators and staff to efficiently record, store, and access critical information about teachers, ensuring a centralized and organized database.

TRMS offers comprehensive functionalities to manage teacher details, including personal information, academic qualifications, and work experience. By enhancing transparency and accountability, the system ensures accurate and up-to-date records with robust security features that prevent unauthorized access. This leads to improved administrative efficiency and better decision-making processes.

The application also aims to improve the quality of teaching by enabling administrators to generate insightful reports on teacher performance and subject-wise allocations. The intuitive interface is designed for easy navigation, even for non-tech-savvy users, ensuring that all users can benefit from the system's capabilities.

To ensure reliability and security, TRMS incorporates backup and recovery mechanisms, user authentication, access control, and data encryption. Additionally, the system supports mobile access, customization, task management, and integration with other systems, making it a comprehensive and essential tool for educational institutions seeking to enhance their administrative operations and the overall quality of education.

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MINI PROJECT REPORT

ON

"TOMATO PLANT LEAF DISEASE DETECTION"

Submitted by

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Under the Guidance

of

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2023-24

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DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

CERTIFICATE

Certified that the mini project work entitled ***"TOMATO PLANT LEAF DISEASE DETECTION"*** *is a bonafide work carried out by*

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in partial fulfilment for the award of **BACHELOR OF ENGINEERING** in **INFORMATION SCIENCE AND ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM** during the year 2023-2024. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The mini project report has been approved as it satisfies the academic requirements in respect of mini project work prescribed for the Bachelor of Engineering Degree.

Mr. Pradeep Nayak Assistant Professor	**Prof. Mounesh K Arkachari** Assistant Professor	**Dr. Sudheer Shetty** Professor
Project Guide	**Project Coordinator**	**Head of Department**

ABSTRACT

Plant diseases cause low agricultural productivity. Plant diseases are challenging to control and identify by the majority of farmers. In order to reduce future losses, early disease diagnosis is necessary. This study presents a deep learning approach for detecting tomato leaf diseases using Convolutional Neural Networks (CNNs). The proposed method involves preprocessing the tomato leaf images, followed by training the CNN model to classify them into one of ten categories: healthy, yellow leaf curl virus (YLCV), bacterial spot (BS), early blight (EB), leaf mold (LM), spectoria leaf spot (SLS) target spot (TS), two spotted spider mite spot(TSSMS), mosaic virus(MV) and late blight (LB). The model was trained using a dataset of 16021 tomato leaf images. The training was conducted for 10 epochs, 20 epochs, and 50 epochs, and the accuracy achieved was 64%, 94%, and 97%, respectively. These results demonstrate the effectiveness of the proposed approach in detecting tomato leaf diseases, and the performance improves with increasing epochs. The automated approach can aid in the early detection and prevention of tomato diseases, which can ultimately help in improving the yield and quality of tomato crops.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELGAUM, KARNATAKA- 590014

A PROJECT REPORT ON

TRAVELLING RECOMMENDATION SYSTEM

Submitted in partial fulfillment for the award of Degree of,

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE AND ENGINEERING

By

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DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

CERTIFICATE

This is to certify that the project entitled "Travelling Recommendation System" has been successfully completed by

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the bonafide students OF DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING, Alva's Institute of Engineering and Technology, Moodbidri affiliated to VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the academic year 2022–23. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed in partial fulfillment of awarding Bachelor of Engineering degree.

Mr.Mounesh K Arkachari Associate Professor Project Guide	Dr. Sudheer Shetty Professor HOD ISE	Mr.Mounesh K Arkachari Associate Professor Project Guide

Name of the Examiners

Signature with Date

1.

2.

ABSTRACT

This internship program provides an immersive experience in web development by integrating foundational and advanced technologies, including HTML, CSS, PHP, JavaScript, and database management. The primary goal is to equip interns with practical skills in designing, developing, and maintaining dynamic and responsive web applications.

Interns will gain hands-on experience in front-end development through HTML and CSS, mastering the creation of structured, visually appealing, and user-friendly interfaces. They will also delve into JavaScript to enhance interactivity and client-side functionality, learning to implement features such as dynamic content updates and user input validation.

On the server-side, the internship emphasizes PHP, offering insight into server-side scripting and its role in managing user interactions, session control, and data processing. Interns will also explore database management systems, focusing on MySQL or similar technologies to design, query, and manipulate relational databases effectively.

Through practical projects and real-world scenarios, interns will develop a comprehensive understanding of full-stack web development, bridging the gap between front-end design and back-end functionality. This experience will not only enhance technical skills but also provide exposure to best practices in coding, debugging, and collaborative software development.

By the end of the internship, participants will be well-prepared to contribute to web development teams, with a robust portfolio demonstrating their ability to build and optimize web applications.