



GHARDA FOUNDATION'S GHARDA INSTITUTE OF TECHNOLOGY

(Approved by AICTE New Delhi, DTE, Maharashtra State, Affiliated to Mumbai University & Accredited by NAAC)

Department of Computer Engineering Academic Year 2023-24

Major Project Gallery

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3	AR Vision	G1	Chavan Pooja Sandeep, Nair Laxmi Venugopal, Bhuran Tanmay Sanjay, Jadhav Roshan Sandip	Prof. Mrs. K. M. Gajmal
4	The Donate Box	G14	Desai Fahad Dilawar, Kawathekar Aditi Vivek, Rajudkar Muhaiba Iliyas	Prof. D. N. Londhe
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6	Mango ripening detection, disease and fertilizer analysis	G16	Jadhav Soham Sunil, Kolpe Niranjan Dhanyakumar, Chinkate Sonal Ganpat, Bhosale Sejal Chandrakant	Prof. Mrs. J. V. Khalkar
7	Augmented Reality and Virtual Reality Assembly Assistance System	G15	Jadhav Kundan Vijay, Rane Mihika Sitaram, Shigwan Sejal Sudhakar, Savaratkar Shubham Subhash	Prof. P. V. Oak
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9	Machine Learning for Crop Yield Estimation in Maharashtra	G2	Gondhalekar Saish Dinesh, Bhuran Sairaj Sunil, Gotal Pranal Mahesh, Jadhav Sejal Santosh	Prof. R. B. Pawar
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We propose a system "Virtual Tour of GIT Campus", which provides a virtual college tour for college visitors which includes students, parents, and guests. They might wish to discover the college infrastructure and facilities provided. For this, they need to actually come and visit the college campus, which will take lots of time as well as effort, and also charge an expense who are at distant locations. To deal with this issue, the proposed system provides a virtual view of college infrastructure using a VR headset. This helps visitors to visit particular departments and labs from remote locations. Also, it can be installed at the entrance of the College, which will help visitors to search the location of a particular student, staff, or lab by showing the exact path through the "Search" module.

The "Mock Interview using AI" project aims to tackle the prevalent challenge of inadequate interview experience and low self-confidence among job seekers and students. This innovative initiative harnesses the power of advanced Artificial Intelligence (AI) and Machine Learning (ML) technologies to revolutionize the process of interview preparation.

By employing a blend of HTML, CSS, JavaScript, Bootstrap, Python, Django, and Sqlite, the project establishes an intuitive and user-friendly platform. Through seamless integration with AI and ML via the Chat GPT API and Rapid AI API, the traditional interview approach is transformed. The system dynamically generates interview questions and provides instant feedback on responses, offering a unique learning experience.

Personalization is ensured through user authentication and performance analytics. By tailoring recommendations according to individual strengths and areas of improvement, the project nurtures interview proficiency and enhances self-assurance.

The "Mock Interview using AI" project bridges the gap between qualifications and interview readiness. By nurturing essential skills and boosting confidence, it empowers users to excel in real-world interviews, reshaping the landscape of interview preparation and setting new standards for success.

The "AR Vision" project envisions a transformative approach to early childhood education by harnessing the power of Augmented Reality (AR) technology to enhance the learning experience within kindergarten classrooms. This initiative aims to revolutionize traditional methods providing young learners with immersive, interactive, and engaging educational content.

The project places emphasis on creating a dynamic and inclusive learning environment that caters to the diverse needs and learning styles of kindergarten-aged children. By integrating AR technology into everyday classroom activities, students will have the opportunity to explore a multidimensional educational landscape, stimulating their curiosity and fostering a lifelong love for learning.

Furthermore, the project places strong emphasis on the role of educators, providing comprehensive training and resources to empower them in utilizing AR technology effectively. By leveraging this innovative tool, teachers will be able to adapt their teaching methods to better cater to individual student needs and capitalize on teachable moments.

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The main objective of this project is to provide a platform for donating materials such as books, stationery, clothes, etc. The Donate Box website will serve as a platform where users can easily list and contribute items they wish to donate, ranging from old clothes and stationery to various goods and schedule a pick-up time or can have a request for a call back.

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Our web application will not only make donations easy and accessible for everyone but also increase the number of people donating through its user-friendly interface, simple stepped processes and secure pick up of the donation. Our website will act as a reliable mediator in the proceedings and, when used effectively, it can become the most powerful medium to combat social issues and maintain balance within communities.

The online donation system makes it easy to collect donations from supporters and provide a seamless donor experience directly through the website. But online donation is determined by a number of factors including trust, average income of the person and banks included for transaction. People don't trust the website, they trust the bank which offers them service.

The SchoolMATE is a comprehensive and user-centric school management system that aims to optimize administrative processes and enhance the overall educational experience. Its public website provides essential information about the school, its faculty, and keeps all stakeholders updated through a dynamic noticeboard. The events gallery showcases the school's vibrant culture, while a contact form facilitates easy communication. Within the secure dashboard, distinct roles are catered to. Administrators can efficiently manage user accounts, staff information, attendance, alumni data, and even generate timetables. They can also maintain an online noticeboard visible on the website. Principals benefit from academic statistics access, enabling data-driven decision-making. They can assign specific staff members to manage facilities and designate class teachers, further enhancing the school's operational efficiency. This role-based delegation ensures that every aspect of the school's administration is optimized and accountable. Staff members benefit from features that allow them to maintain student records, track attendance, and manage examination details for their assigned classes. This ensures that student information is accurate and up-to-date, attendance is monitored effectively, and examination-related information is readily available.

The project proposes to use machine learning and computer vision techniques to improve mango production by addressing challenges such as disease infection, post-harvest losses, and inefficient management practices. It aims to develop a comprehensive system for mango cultivation that includes harvest detection, disease prediction, ripening prediction, and fertilizer recommendation to enhance efficiency, productivity, and sustainability. The project also aims to improve grading and quality assessment of mango fruits, benefiting farmers, consumers, and exporters of mango products.

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Assembly Assistance

ABSTRACT

This project introduces an innovative Augmented Reality and Virtual Reality Assembly Assistance System aimed at providing intuitive step-by-step instructions for complex assembly tasks. In this project, we're creating a helpful tool using Augmented Reality (AR) and Virtual Reality (VR). Imagine if you're putting something together, like furniture or a machine. With the help of Unity 3D(game engine) our tool will show you pictures and even videos to guide you step by step. So, instead of reading a manual, you can see exactly what to do in front of you. It's like having a friendly assistant in your AR or VR world, making assembly much easier.

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In this project, assembly steps are visually presented through images and videos, enhancing understanding and reducing the need for text-based instructions. Users can track their progress through the assembly process and revisit previous steps if necessary. The project encompasses content creation, user interface design, image recognition, interactive features, and user testing. As technology keeps getting better, our project is like a first step towards a future where augmented and virtual realities become really important for learning, getting better at things, and making processes work even smoother.

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The Crave Connect project introduces a Python Django-based Multi-Vendor Restaurant Marketplace that redefines the dining experience in the digital age. This innovative platform seamlessly connects a diverse array of restaurant vendors with food enthusiasts, offering a dynamic and interactive culinary ecosystem. With features tailored for both vendors and customers, Crave Connect facilitates effortless food ordering, delivery, and reservations, while also supporting multiple payment options and real-time order tracking. Its user-friendly design, robust security, and scalability empower restaurant owners to thrive in the competitive food industry, while providing customers with personalized recommendations, loyalty programs, and a captivating dining experience. Crave Connect is more than just a marketplace; it's a technological and gastronomic adventure, symbolizing the future of food service and vendor-customer interaction.

IV

Agriculture, a significant yet often undervalued occupation in India, holds immense potential for advancement through the application of machine learning technologies. This study focuses on crop yield estimation in Maharashtra state and explores the effectiveness of various machine learning techniques in this context. By leveraging predictive models, the research aims to transform the agricultural sector by empowering farmers in Maharashtra to make informed decisions about crop selection. Through a comprehensive analysis of different machine learning algorithms, the study assesses their accuracy in predicting crop yields based on factors such as temperature, rainfall, and geographical area specific to Maharashtra. By incorporating these crucial variables, the models provide data-driven insights that enable farmers to strategically plan their crop choices, optimizing productivity and income. The adoption of technology-driven yield predictions has the potential to elevate the agricultural landscape in Maharashtra, benefiting the economic prosperity of Indian farmers and elevating the entire agriculture industry. By equipping farmers with valuable information to make well-informed choices, this research contributes to enhancing the sustainability and efficiency of agricultural practices in the state. Ultimately, the integration of machine learning in agriculture promises to create a more resilient and prosperous future for Maharashtra's farming communities.

The primary aim of this study is to explore the application of diverse machine learning algorithms, including decision trees, support vector machines, random forests in predicting crop yields. In pursuit of this objective, historical agricultural data encompassing factors such as climatic conditions, soil characteristics, crop types, and N,P,K values present in the soil are collected, preprocessed, and integrated into the machine learning models. The models are then trained and validated on this extensive dataset to assess their predictive capabilities.

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In conclusion, the application of machine learning in crop yield prediction has the potential to revolutionize agriculture.Continued research and collaboration among the scientific community, policymakers, and farmers are vital to harness the full potential of machine learning for optimized and resilient crop production in the face of evolving environmental and economic challenges.

V

The multi-vendor ecommerce website emphasizes the platform's major concepts and features, defining its goal, benefits, and technological underpinning. This abstract provides an overview of the system's core elements and benefits. This website is primarily designed to be used in various industries and contexts where multiple sellers or vendors come together to offer products or services to a wide range of customers. by using the technologies such as PHP, HTML, CSS, JAVASCRIPT, MySQL and Laravel 9 framework.

As a result of the expanding e-commerce business, multi-vendor platforms have evolved, allowing several independent vendors to advertise and sell their items in a single online marketplace. The purpose of this project is to use the Laravel framework to build a dependable and scalable multi-vendor e-commerce platform. The system will allow for seamless interactions between customers and sellers, providing a convenient shopping experience while allowing retailers to run their stores efficiently.

The multi-vendor ecommerce website is a revolutionary solution that connects various vendors, offering a diverse range of products and services to a global customer base. This platform enables sellers to create virtual storefronts, manage inventory, handle orders, and engage with customers. The project utilizes MVC architecture, Eloquent ORM, and the Laravel framework's Blade templating engine to create a modular and maintainable codebase. To construct a trustworthy and user-friendly multi-vendor e-commerce platform, best practices in security, database design, and user experience will also be used. Using the Laravel framework, this project will create a feature-rich multi-vendor platform in an effort to improve the e-commerce landscape. The platform's success will be determined by its capacity to give customers a seamless shopping experience and equip sellers to effectively manage their online shops within the marketplace.

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In the digital era, "CeramicsHeaven: Web Application for Ceramic Industry and Products" emerges as a captivating online gateway to the realm of fine ceramics. This project is dedicated to crafting a unique digital platform that bears the name "CeramicHeaven," designed to showcase the diverse and exquisite world of ceramics in a digital landscape.

More than just an ordinary online destination, "CeramicHeaven" stands as a treasure trove of highquality ceramics, encompassing a wide range of products, including kitchenware, bathroom fixtures, sanitary ware, and an extensive collection of decorative tiles. "CeramicHeaven" is portal to a world where you can explore a carefully curated selection of products that enhance the aesthetics and functionality of your living spaces.

Whether you seek durable kitchenware, elegant bathroom fixtures, or the perfect tiles to adorn your home, "CeramicHeaven" offers a comprehensive catalog chosen to meet the discerning preferences of our customers. Our primary objective is to provide a seamless and enjoyable online shopping experience, connecting ceramic enthusiasts with exceptional products.

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The Online MedDonor Portal is a benevolent endeavor that leverages the principles of altruism and resource redistribution to address healthcare disparities. This abstract initiative collects surplus, non-expired medications from donors and channels them to marginalized communities. By doing so, it endeavors to mitigate the profound disparities in healthcare access. The project rests on the premise that unused medicines can be potent tools in enhancing the health and wellbeing of underserved populations. Through a network of donors, organizers, and beneficiaries, it aspires to bring about positive change in healthcare access and outcomes for those in need.

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In the era of digital education, the demand for efficient and accurate evaluation of subjective answers has never been greater. The project "Automatic Intelligent Grading System for Subjective Answers" aims to address this critical need by developing an innovative solution that harnesses the power of artificial intelligence and machine learning. This system is designed to automatically assess and grade subjective responses, offering a streamlined and objective evaluation process for educators, trainers, and learners alike.

The key objectives of this project include the creation of a robust algorithm capable of comprehending and evaluating a wide range of subjective answers, the integration of natural language processing techniques to understand context and meaning, and the provision of detailed, constructive feedback to aid in the learning process. By leveraging advanced technologies, this project seeks to enhance the objectivity, speed, and consistency of subjective answer grading, ultimately improving the educational assessment process.

The "Automatic Intelligent Grading System for Subjective Answers" project is poised to revolutionize the way educators assess and provide feedback on open-ended responses, making the evaluation process more efficient, reliable, and insightful. This innovation not only benefits teachers and educational institutions but also empowers learners with a deeper understanding of their strengths and areas for improvement. In an era where digital education is becoming increasingly prevalent, this project offers a pioneering solution to meet the evolving needs of the educational landscape.

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ABSTRACT

In an increasingly digital world, a school's online presence is vital to its success. The Rotary English Medium School Website project is a response to the challenges faced by Rotary English Medium School. Although the school currently has a website, it is neither responsive across various devices nor adaptable in terms of content management.

The lack of responsiveness hinders the website's usability on a multitude of devices, ranging from smartphones to tablets and desktop computers. Moreover, the current Rotary School website is static in nature, with its content exclusively modifiable by programmers. This limitation imposes considerable constraints on timely updates and real-time communication with students, parents, and staff. It restricts the dissemination of crucial information, including announcements, event details, and faculty changes.

The Rotary English Medium School Website project promises to unlock new possibilities for the Rotary English Medium School, ensuring it remains at the forefront of modern education. This report outlines the objectives, methodologies, and anticipated outcomes of this transformative endeavor. It serves as a roadmap for creating a responsive website, an efficient data management application, and an engaging e-learning platform that will benefit students, parents, and staff alike.

The "Prediction of Gharda Institute of Technology (GIT) Student Performance in Campus Placement" project is a pioneering endeavor aimed at revolutionizing the campus placement process at GIT. Recognizing the critical importance of placements in a student's academic journey, this project harnesses the power of predictive analytics and machine learning to optimize placement outcomes. The central objective of this project is to develop a sophisticated predictive model capable of forecasting a student's probability of success in campus placements. This prediction relies on a comprehensive analysis of diverse factors, including academic records, skill proficiencies, extracurricular involvement, internships, personal attributes, and performance in placement interviews. By scrutinizing historical placement data and employing state-of-the-art machine learning algorithms, the model unveils intricate patterns and relationships among these factors, empowering stakeholders with valuable insights. To build a model that can be used to predict the probability that a randomly chosen student will be placed or not. The model is based on binary logistic regression which is a commonly used classification algorithm in this project as well as Support Vector Machine, Random Forest Classifier, Naive Bayes,KNN etc. models will also get predicted according to the accuracy of the models.The backend part will be handled through Django framework.

The "Prediction of Gharda Institute of Technology Student Performance in Campus Placement" project represents a significant leap forward in the realm of education and career planning. By harnessing data and machine learning, it aspires to elevate placement rates for GIT students, strengthen the institute's industry ties, and contribute to a more informed and efficient campus placement ecosystem. This project exemplifies GIT's commitment to academic excellence and career success, ultimately benefiting students, the institution, and prospective employers alike.

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This abstract provides an overview of a project that involves the development of a voice-controlled car using Arduino and a voice recognition module. The project aims to create an innovative and user-friendly interface for controlling a small-scale robotic car through natural language commands.. The system consists of two main components: the hardware and the software. The hardware comprises an Arduino microcontroller, a motor driver, wheels, and a voice recognition module, while the software includes code to interpret voice commands and control the car's movements. The Arduino, acting as the brain of the car, receives the interpreted voice commands and controls the motors to move the vehicle accordingly. This real-time interaction between the voice recognition module, Arduino, and the car's actuators allows for precise control of the car's movements. The project offers various potential applications, including remote monitoring, surveillance, educational tools, and assistive devices. Users can remotely navigate the car and access hard-to-reach places, making it a versatile solution for various domains.

Farm2Tech is a cutting-edge software solution that heralds the digital transformation of rural dairy management by seamlessly integrating e-commerce capabilities with resource management functionalities. Developed using a modern technology stack comprising React.js (React Native for the portal), JavaScript, HTML, CSS, and the versatile NoSQL database MongoDB, Farm2Tech empowers dairy companies, farmers, delivery workers, and consumers alike to optimize their interactions and streamline daily operations.

Farm2Tech consists of distinct modules catering to various stakeholders:

1. Consumer Portal: This module provides consumers with an intuitive platform for ordering dairy products with interactive features like quick orders, monthly subscriptions, and the flexibility to adjust daily supply according to their needs.

2. Admin/Company Portal: Dairy companies can efficiently manage their operations, monitor sales, and gain insights into consumer behavior through this centralized portal. It offers tools for inventory management, order processing, and analytics to enhance decision-making.

3. Farmer Details: Empowering dairy farmers, this module allows them to seamlessly coordinate with dairy companies for milk collection. It facilitates real-time updates on collection schedules, quantities, and payments, enhancing transparency and trust between farmers and dairy companies.

4. Delivery Worker Portal: Delivery workers benefit from optimized route planning and tracking tools, ensuring efficient and timely delivery of dairy products to consumers. This module enhances productivity and minimizes delivery errors.

Farm2Tech's architecture is highly scalable, accommodating the expansion into other dairy product categories beyond milk. This flexibility ensures adaptability to changing market demands and the ability to incorporate new offerings seamlessly.

In an era where digitalization is crucial for rural dairy management, Farm2Tech emerged as a game-changer. It enhances the dairy ecosystem's efficiency, transparency, and accessibility, thereby bridging the gap between rural and urban markets. With its robust features and user-friendly interfaces, Farm2Tech is poised to revolutionize the dairy industry by making digitalization a reality for rural areas, ultimately improving the livelihoods of farmers and delighting consumers with quality dairy products.

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