



iT CHRONICLES

THE OFFICIAL STUDENT TECH MAGAZINE



INNOVATIVE
IDEAS



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CREATIVE
CONFIDENCE



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UNITED

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INSPIRE.



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SOLUTIONS



BUILDING
BETTER
TOMORROW



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FOR A BRIGTER
FUTURE



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Institute Vision

To become a globally recognized institution that develops professionals with integrity who excel in their chosen domain making a positive impact in industry, research, business and society



Institute Mission

- To provide the ambience necessary to achieve professional and technological excellence at the global level.
- To undertake collaborative research that fosters new ideas for sustainable development.
- To instill in our graduates ethical values and empathy for the needs of society.

Department Vision

“To become a globally recognized centre of excellence in the field of Information Technology, providing technology excellence that advances learning, teaching, research to produce budding IT professionals, researchers, innovators and entrepreneurs.”

Department Mission

- Produce graduates with the best knowledge and practical skills by imparting innovative skills, research aptitude, ethics, and social responsibility.
- To create ambience of academic excellence through state of the art infrastructure and learner centric pedagogy leading to employability, and research.
- Imbibe and in still in them the required qualities to become leaders who can make positive contribution to the society.
- Enhance the student's knowledge in the latest technologies by organizing and participating in technical programs
- Interact and work closely with industries and research organizations to accomplish technology transfer

2024-25



IT CHRONICLE

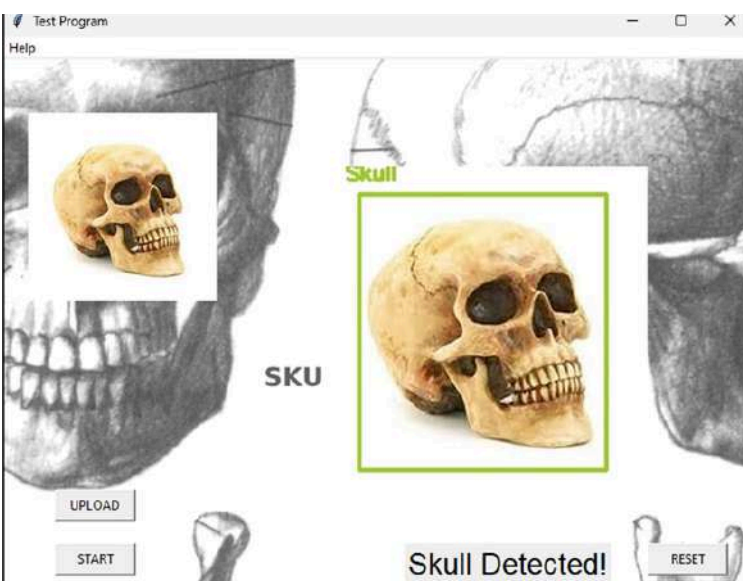
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SKULL DETECTION USING ARTIFICIAL INTELLIGENCE



This mini-project delves into the innovative realm of AI-enabled facial recognition by utilizing skull scans as the primary source of identification. Through a fusion of digital imaging, machine learning algorithms, and artistic expression, the project showcases the potential of technology to uncover identity beyond traditional facial features. By juxtaposing images of scanned skulls with computer-generated reconstructions and artistic interpretations, the project explores the intricate interplay between anatomy, technology, and artistic representation. Through this interdisciplinary approach, viewers are prompted to reconsider the boundaries of facial recognition and contemplate the ethical implications of AI-driven identity verification. AI-Assisted skull recognition serves as a catalyst for dialogue on the evolving landscape of biometric surveillance, human-machine interaction, and the role of art in shaping our understanding of identity in the digital age.

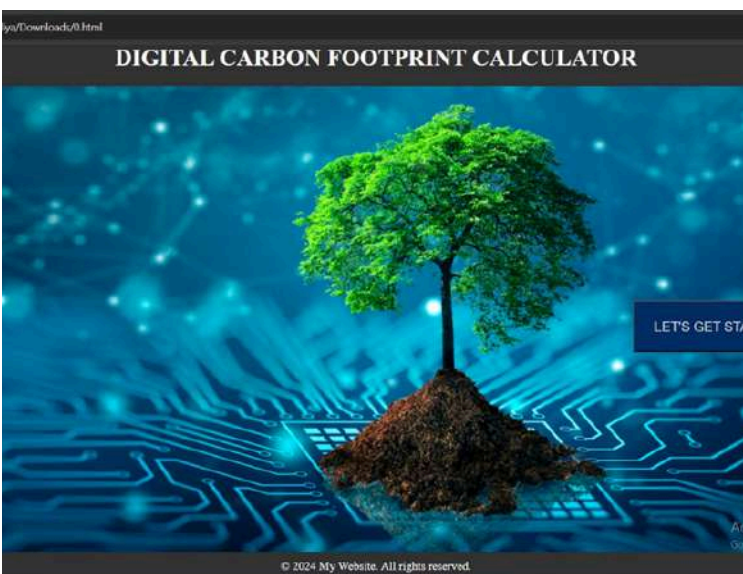
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CALCULATION OF DIGITAL CARBON FOOTPRINT



Digital carbon footprint is the amount of carbon dioxide (CO_2) emitted through the use of digital technologies such as internet browsing, video streaming, emailing, cloud storage, and electronic devices. This project aims to estimate the carbon footprint of common household digital activities by analyzing their energy consumption and corresponding carbon emissions. Using technologies such as HTML, JavaScript, and Shell scripting, the system calculates emissions based on device usage, network equipment, data centers, and internet infrastructure. The project helps users understand the environmental impact of their digital habits and promotes sustainable and responsible technology usage.

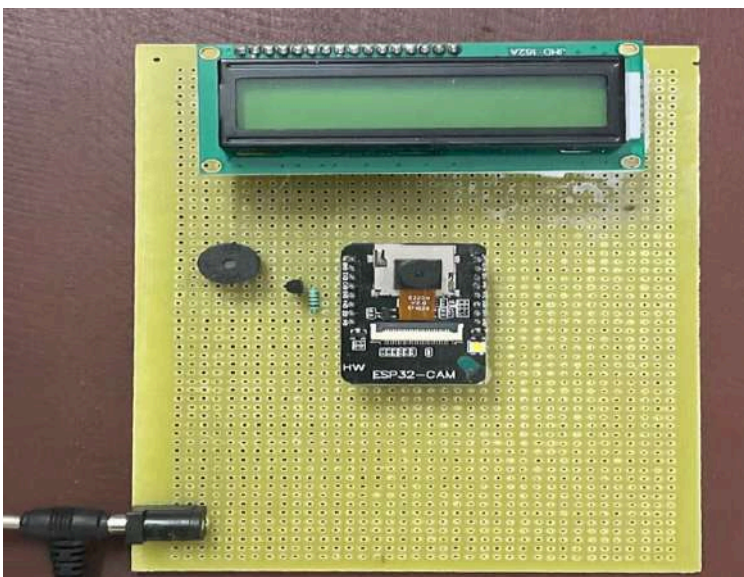


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AI BASED REAL-TIME FIRE DETECTION SYSTEM



This project aims to develop a fire detection system using Artificial Intelligence (AI) to bolster safety measures through real-time fire detection. It involves collecting and pre-processing datasets containing fire images or videos. Convolutional Neural Networks (CNNs) are utilized for image-based fire detection, with the data partitioned into training, validation, and testing sets. Upon model training, deployment into a real-time fire detection system ensues, potentially integrating with surveillance cameras. It ensures the system's reliability in fire detection, minimizing false alarms. By incorporating AI into fire detection systems, this project contributes to safety technology, facilitating prompt response & mitigation efforts in a fire outbreak.

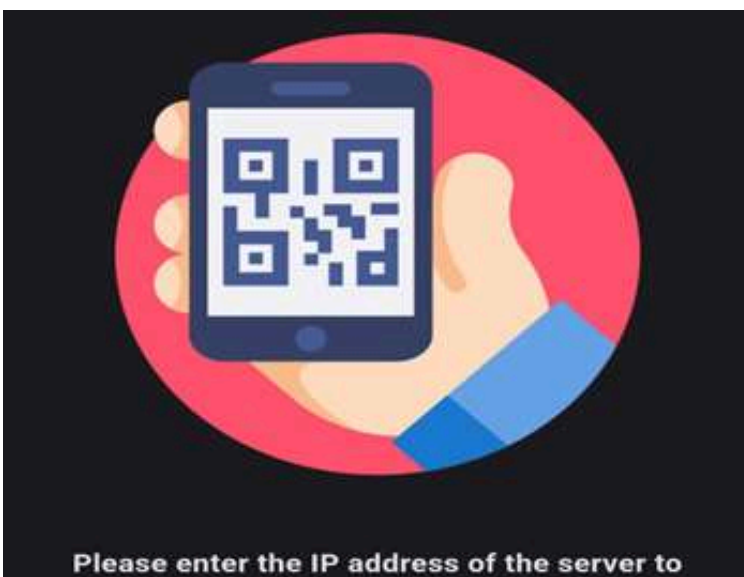


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FAKE PRODUCT DETECTION USING BLOCKCHAIN

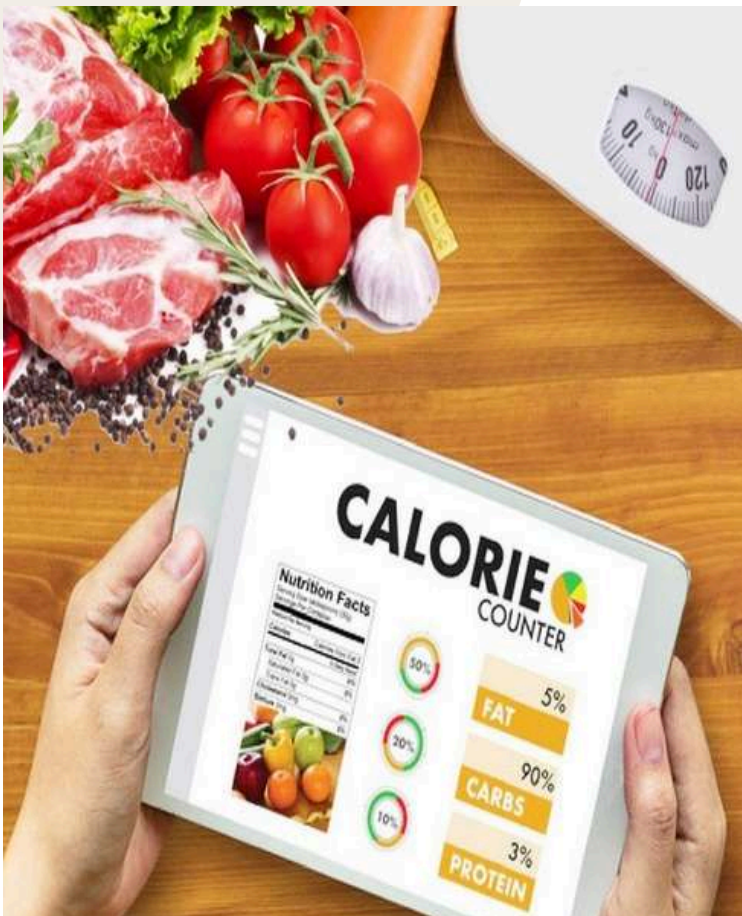


Counterfeit products have become a major concern across various industries, causing financial losses to manufacturers and posing health and safety risks to consumers. This project proposes a Blockchain-Based Fake Product Identification System that enables users to verify the authenticity of products using QR codes and barcodes. Each product is assigned a unique identification code, which is securely stored on a blockchain network along with its details. When a customer scans the code, the system compares it with the blockchain records to determine whether the product is genuine or counterfeit. If a match is found, the product is confirmed as authentic, and the manufacturer is notified about the purchase. If the code is invalid or duplicated, the system alerts the user about the possibility of a fake product. By leveraging blockchain technology, the proposed system ensures data security, transparency, and traceability, helping manufacturers protect their brands and consumers make informed purchasing decisions.



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CALORIE DETECTION IN FOODS USING MACHINE LEARNING AND IMAGE PROCESSING



This study introduces a novel calorie detection application designed to assist users in making informed dietary choices. Leveraging state-of-the-art machine learning algorithms and advanced image processing techniques, the application accurately estimates the calorie content of various food items from images uploaded by users. Integrated with the Flask and Flutter frameworks, the application offers a seamless user experience, with an intuitive interface for easy navigation and interaction. The robust backend infrastructure ensures efficient processing and scalability, enabling the application to handle multiple image requests concurrently. Future developments may focus on enhancing the application's ability to handle challenges such as occlusions and lighting variations, as well as integrating personalized nutrition recommendations tailored to individual user preferences. Overall, the calorie detection application represents a valuable tool for promoting healthier lifestyles and fostering dietary awareness among users, with potential for continued refinement and innovation in the field of nutrition technology.



Welcome to Caloriewise

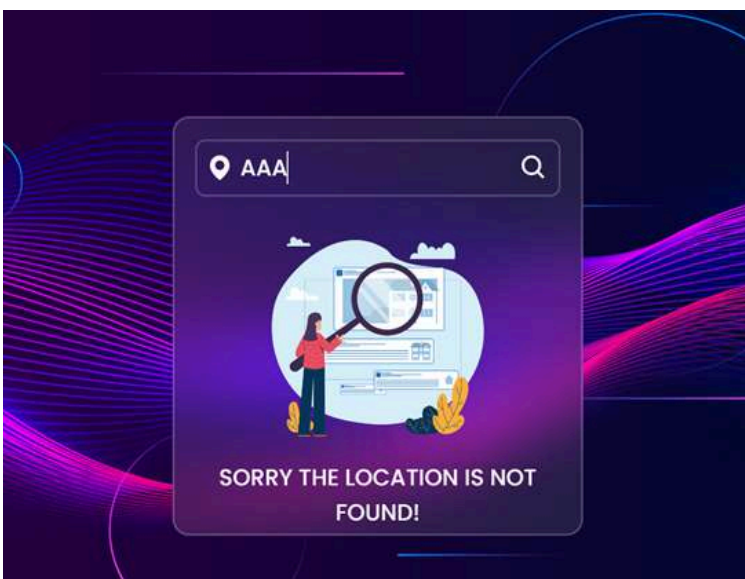
Identify different types of Indian food and get to know the calories you consume for better health.

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WEATHER BOT USING MACHINE LEARNING AND WEB SCRAPING



This mini-project is dedicated to crafting a sophisticated weather bot designed specifically for real-time detection and dissemination of weather alerts. By harnessing the power of cutting-edge technologies such as machine learning and web scraping, the bot ensures users receive immediate and precise notifications regarding weather-related risks. Through machine learning algorithms trained on vast datasets of historical weather patterns, the bot can accurately forecast potential hazards. Additionally, its web scraping capabilities allow it to gather live updates from diverse sources, ensuring comprehensive coverage of weather conditions. By prioritizing the integration of these advanced technologies, this weather bot aims to provide users with indispensable tools for enhancing safety and preparedness in the face of fluctuating weather dynamics and severe events.



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PINEGUARD : AI FOR PINEAPPLE DISEASE DETECTION



PineGuard represents a pioneering initiative in pineapple farming, harnessing the power of artificial intelligence (AI) to transform disease detection and management practices. By employing a Convolutional Neural Network (CNN) model, PineGuard analyzes images of pineapple plants uploaded by users to provide accurate diagnoses of diseases. The objectives of PineGuard encompass offering a user-friendly platform for disease detection, providing educational resources on pineapple management, and empowering farmers to make informed decisions regarding disease management. This innovative project aims to revolutionize pineapple cultivation by introducing a sophisticated AI system capable of early disease detection through image analysis. By leveraging AI algorithms, PineGuard enhances plant health assessment by identifying early signs of diseases, pest infestations, or nutrient deficiencies, thereby fostering sustainable and resilient pineapple farming practices.

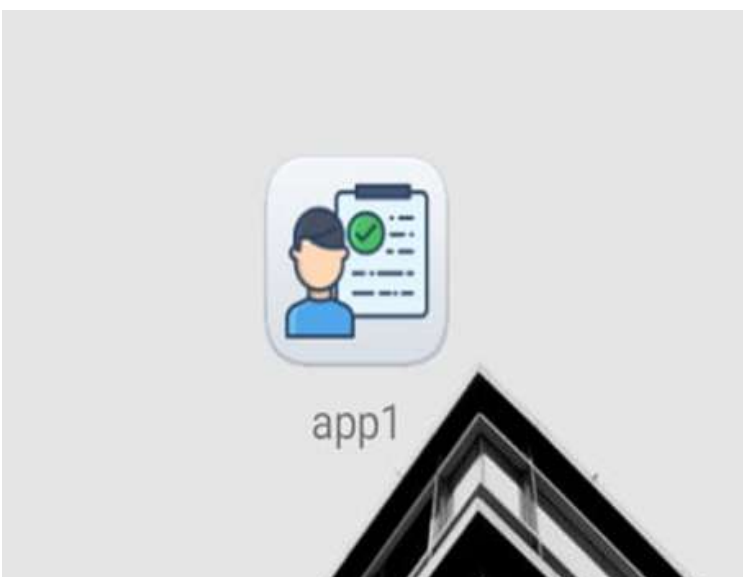


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ATTENDANCE MANAGEMENT SYSTEM USING FACE RECOGNITION



The management of the attendance can be a great burden on the teachers if it is done by hand. To resolve this problem, smart and auto attendance management system is being utilized. By utilizing this framework, the problem of proxies and students being marked present even though they are not physically present can easily be solved. This system marks the attendance using live video stream. The main implementation steps used in this type of system are face detection and recognizing the detected face. After these, the connection of recognized faces ought to be conceivable by comparing with the database containing student's faces. This model will be a successful technique to manage the attendance of students. The proposed system uses Live Webcam based Face Attendance System Project through python programming.



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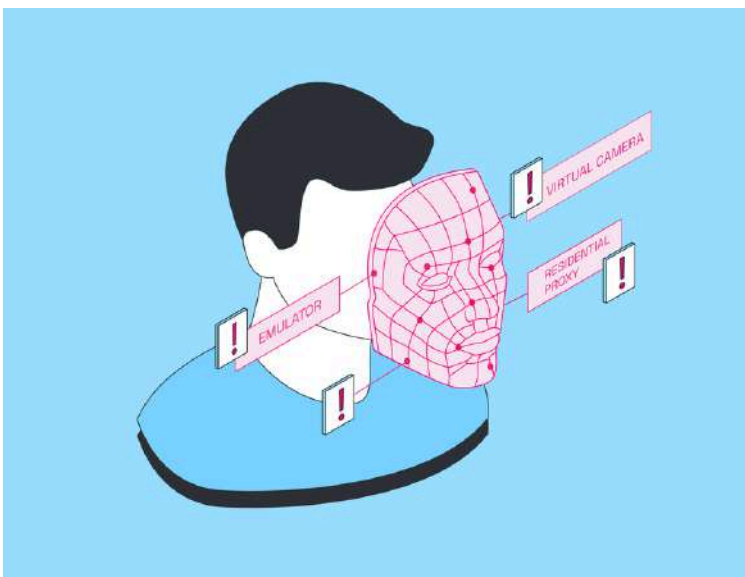
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DEEPPFAKE DETECTION



This project introduces a robust deepfake detection system, incorporating both backend and frontend components. The backend utilizes Convolutional Neural Networks (CNNs) for visual data and Recurrent Neural Networks (RNNs) for auditory data, implementing multimodal fusion to enhance detection accuracy. Explainable AI (XAI) techniques, such as attention mechanisms and saliency maps, are integrated into the backend for interpretability. On the frontend, a user-friendly interface is designed to facilitate seamless interaction with the system. The interface includes features for uploading and analyzing media content, presenting users with informative visualizations generated by the XAI components. Additionally, the system provides detailed explanations for its decisions, empowering users to understand the detection process. The backend and frontend components are integrated to form a cohesive and user-centric deepfake detection system. Transfer learning is applied to adapt the model to diverse datasets. The project's success is evaluated through metrics, including accuracy and interpretability, and compared against existing methods.

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PLANT SPECIES IDENTIFICATION USING IMAGE PROCESSING



The mini project deals with identification of plants through plant leaves on the basis of their shape, color, and texture using digital image processing techniques for classifying the plant species using different machine learning algorithms. This project includes reviewing multiple image processing methods to use machine learning to identify multiple plants using its leaf feature in the form of an image. Here the image processing technique is considered as the main method for classifying different plants of different characteristics or specific portions or regions of the plant leaves which will be then identified through image processing. The proposed project only focuses on the identification and classification of different parts of leaves to identify the plant species. This project abstract offers an overview of the various classification methods used in the classification of plant leaf identification. In the proposed project, SVM is the main method or algorithm that we are using for the identification or classification of plants. The proposed work through experimental results claims a better accuracy in the identification of plant species through its leaf feature and it makes the identification of plants much easier and safe time

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*Together in Technology
Towards a Brighter Future*

