RAVI SHANKAR VEKANURU

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CAREER OBJECTIVE

Aspiring Computer Science Engineer with expertise in Data Structures, Java, Python, and SQL. Passionate about leveraging innovative technologies to solve real-world problems and build scalable solutions. Proficient in applying advanced programming techniques and analytical skills to develop intelligent systems, while continuously learning and adapting to new challenges.

PROJECTS

SKIN CANCER DETECTION: **Jan 2024 - MAY 2024**

The project involved developing a machine learning model to detect skin cancer by classifying images as either related to skin cancer or not. The model was built using a Convolution Neural Networks (CNN), a deep learning technique ideal for image classification tasks. The system was trained using a labeled dataset consisting of images of skin lesions, which allowed the model to learn the patterns associated with skin cancer. After training, the model's performance was evaluated based on accuracy, ensuring its ability to make reliable predictions. This machine learning-based approach offers a promising solution for early diagnosis, helping healthcare professionals identify potential skin cancer cases more efficiently.
Tech: Python

Grammar Correction Using NLP: **Jan 2024 - MAY 2024**

A web interface was created to accept both text and image inputs, enabling users to correct grammatical errors. For image inputs, Optical Character Recognition (OCR) was applied to extract the text, which was then processed using Natural Language Processing (NLP) techniques. The system analyzed the text for common grammatical mistakes by utilizing techniques like tokenization, Part-of-Speech tagging, and error correction algorithms. This real-time tool allows users to improve their writing accuracy and provides instant feedback on corrections, ensuring enhanced communication.
Tech: Python

E- Waste Management System: **AUG 2022 - DEC 2022**

The E-waste management system is an IoT-enabled system designed to streamline e-waste collection. It uses an ultrasonic sensor to monitor bin fill levels and a load cell to measure waste weight, with data processed by an ESP32 microcontroller. The system transmits real-time updates to a web dashboard via Wi-Fi, enabling efficient waste management and timely collection. This innovative solution promotes eco-friendly disposal practices and reduces operational costs, making it ideal for schools, offices, and public spaces.
Tech: Python, C++ (Arduino)

Easy Leave Management:

Easy Leave Management is a web-based platform that simplifies leave request and approval processes. Employees can easily apply for leave, managers can review and approve requests, and HR can track leave balances and generate reports. The system ensures real-time notifications, transparent workflows, and accurate record-keeping, making leave management efficient and hassle-free for organizations.
Tech: MERN

SMART HELMET WITH ALCOHOL DETECTION: **AUG 2024 - NOV 2024**

Developed as an IoT-based solution, the Smart Helmet with Alcohol Detection ensures enhanced safety for drivers. The helmet is designed to verify whether the driver is wearing it properly and detect alcohol consumption. It uses an alcohol sensor to measure the driver's blood alcohol content and an infrared sensor to confirm helmet usage. Additionally, the system incorporates accident detection using accelerometers to monitor any sudden movements or impacts. All data, including alcohol levels, helmet status, and accident alerts, is transmitted in real-time to an IoT platform like Thing Speak, where it is visualized for monitoring. In case of an accident or alcohol detection, SOP (Standard Operating Procedure) calling is automatically triggered, alerting emergency services for immediate action.

Tech: C++ (Arduino)

HIGHWAY LANE CHANGING DECISION MAKING USING RL:

The model was trained to make optimal lane-changing decisions on highways using reinforcement learning techniques. By analyzing various traffic conditions, such as vehicle proximity and speed, the system learned to select the most appropriate lane to reduce congestion and minimize the risk of accidents. The project focused on improving traffic flow and safety through intelligent decision-making, demonstrating its potential application in autonomous driving systems.

Tech: Python

EDUCATION

VIT-AP UNIVERSITY, ANDHARA PRADESH **2021-2025**

B-Tech in Computer Science with Specialization in Artificial Intelligence. **CGPA: 8.59/10**

ASSOCIATED COURSEWORK: Object-Oriented Programming, Data Structures and Algorithms, Database Management Systems, Computer Networks, Machine Learning Algorithms.

NARAYANA JUNIOR COLLEGE **2019-2021**

Senior Secondary School (Board: BIEAP) **PERCENTAGE: 958/1000**

RAVINDRA BHARATHI PUBLIC SCHOOL **2018-2019**

Secondary School (Board: STATE) **GPA: 9.7/10**

CERTIFICATIONS

Problem Solving (Basic) – Hacker Rank
Python Essentials - NPTEL
SQL (Basic) – Hacker Rank
MICROSOFT AZURE FUNDAMENTALS

SKILLS

Languages: Core Java, Python, SQL, { HTML,CSS, Java Script }(BASICS).
Skills: Typing knowledge, Microsoft word, Microsoft excel basics, power point, Communication, Creativity, Time Management