Pardheev Vatturu

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OBJECTIVE

Artificial Intelligence and Engineering student with strong interests in Machine Learning and Web Development. A team player eager to contribute to software projects and gain practical experience in a collaborative environment.

PROJECTS

RFID-Assisted Vehicle Speed Monitoring & Classification   2025

- Engineered a dual-node ESP32 system for precise speed detection and integrated a ResNet computer vision model to cross-verify RFID tags with vehicle types.
- Developed a real-time backend using Node.js, MongoDB, and WebSockets (<100ms latency) to log violations and trigger automated alerts, optimizing power consumption via camera-based selective RFID activation.

Automated Waste Segregation Using Manipulator   2025

- Developed an AI-driven sorting system using a UFactory Lite 6 robotic arm and Vision Transformers to segment and classify waste into four distinct categories (Polythene, Hard Plastic, Metal, Paper).
- Implemented homographic coordinate transformation to map visual data to the robot's workspace, ensuring precise pick-and-place operations for contactless waste handling.
- Integrated a Large Language Model (LLM) to analyze classified items and generate context-specific disposal recommendations (e.g., pyrolysis for plastics), promoting sustainable waste treatment.

CodeProctor   2025

- Implemented a code evaluation system, tailored for college students with multi-role user management and automated programming assessment.
- Designed responsive UI components with shadcn/ui and Tailwind CSS, including advanced tables supporting thousands of records with real-time pagination.
- Engineered a secure PostgreSQL database layer with input validation and optimized queries for scalable academic data management.

EDUCATION

B. Tech, Computer Science & Engineering (AI)   Aug 2023 – May 2027
Amrita Vishwa Vidyapeetham   GPA: 8.16

HSC Andhra Pradesh State Board, PCM   Jun 2021 – May 2023
Krishna Chaitanya Junior College   Percentage: 91.5

SSC, CBSE   Jun 2019 – Mar 2020
Akshara Vidyalaya   Percentage: 90.2

SKILLS

Programming Languages: Python, C++
Web Development: HTML, CSS, JavaScript, React
Frameworks & Libraries: Scikit-learn, Open CV
Version Control: Git, GitHub