SAMBA SHIVA REDDY DWARAM

ECE Student | Embedded Systems Enthusiast | Technology Explorer

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Professional Summary

Enthusiastic and detail-oriented Electronics and Communication Engineering (ECE) student with a strong foundation in embedded systems, cloud computing, and full-stack development. Passionate about leveraging technology to develop innovative solutions. Skilled in Python, AWS Cloud Computing, and Microchip Embedded Systems with hands-on experience in real-world projects. Seeking an opportunity to apply technical expertise in a dynamic and growth-oriented environment.

Education

Bachelor of Technology in Electronics and Communication Engineering
Vignana Bharathi Institute of Technology, Hyderabad
Graduation: 2021 - 2025 | CGPA: 7.5

Intermediate (TSBIE), M.P.C
Sri Chaithanya Junior College, Hyderabad
2021 | Percentage : 77.2%

Class -10
Bhashyam High School, Hubsiguda
2019 | CGPA : 9.2

Technical Skills

- **Programming Languages:** Embedded C, Python, C
- **Scripting Languages:** HTML, CSS
- **Microcontrollers:** Arduino, ESP8266
- **Software & Tools:** Arduino IDE, Python IDLE, Visual Studio Code
- **Libraries & Frameworks :** OpenCV, TensorFlow
- **Communication Protocols:** I2C, SPI, UART, LoRa
- **Areas of Expertise:** Sensor Integration, Autonomous Navigation, IoT, LoRa Communication, AWS Cloud Computing

Certifications

- Python Certification – Krivi Institute
- Embedded Developer Virtual Internship – AICTE Eduskills, Supported by AWS
- AWS Cloud Virtual Internship – AICTE Eduskills, Supported by AWS
- AI-ML Virtual Internship – AICTE Eduskills, Supported by AWS
- Java Full Stack Programming Training – Wipro TalentNext Program

Projects

Smart Helmet for Underground Mining Using LoRa

Tools Used: ESP8266, LoRa Module, Temperature, Humidity, Heartbeat Sensor, Pressure Sensor, GPS module, Gas Sensors and a web interface.

- Designed and developed a smart helmet for underground mining to monitor environmental conditions and worker safety.
- Integrated ESP8266, LoRa Module, Temperature, Humidity, Heartbeat Sensor, Pressure Sensor, GPS module, and Gas Sensors for real-time data collection.
- Developed a web interface to display sensor data and alert the user in case of hazardous conditions.
- Enhanced safety measures by enabling remote monitoring and emergency notifications.

Real-Time Human Pose Estimation Using Machine Learning

Tools Used: Python, OpenCV, TensorFlow, Webcam, Computer Vision Algorithms

- Implemented a human pose estimation model using Python, OpenCV, and TensorFlow.
- Designed an AI-based system capable of analyzing human posture for applications in healthcare, sports, and robotics.

Automatic Street Light System using LDR and Arduino

Tools Used: Arduino Uno, Light-Dependent Resistor (LDR), Relay Module, LED Bulbs, Power Supply

- Developed a smart lighting system using a Light-Dependent Resistor (LDR) and Arduino to optimize street lighting.
- Successfully deployed the system in a real-time environment, enhancing energy efficiency and automation.

Voice-Controlled Robot using Arduino

Tools Used: Arduino Uno, HC-05 Bluetooth Module, L298N Motor Driver, Android App, Batteries, DC Motors.

- Designed and implemented a voice-controlled robot using Arduino and HC-05 Bluetooth module.
- Integrated motor driver modules for smooth and precise movement.
- Developed an Android-based interface to send voice commands for robot control.

Areas of Interest

Embedded Systems | Robotics | IoT