Madhu Sudhana Reddy Satti

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Professional Summary

Electronics and Communication Engineering student (2026 Batch) with a strong foundation in digital/analog circuit design, Verilog HDL, and embedded systems. Seeking an internship at AMD to contribute to VLSI design, RTL development, or embedded hardware-software projects while enhancing my semiconductor design skills.

Education

Sri Vasavi Engineering College, Tadepalligudem, Andhra Pradesh
Bachelor of Technology (B.Tech) in Electronics and Communication Engineering
2022 – 2026 (Expected) | CGPA: **8.9** (as of 2024)

Work Experience

Freelance AI/ML Developer

- Completed client projects by designing and delivering AI/ML solutions tailored to their specific requirements.

Skills

Languages: C, C++, Python, Verilog HDL, Embedded C

Hardware/Tools: MATLAB, Xilinx Vivado

Concepts: Digital Electronics, Analog Electronics, Digital design.

Other Tools: Git, Firebase, MySQL, Linux Basics.

Frameworks/Libraries: Pandas, NumPy, Scikit-learn, TensorFlow, Pytorch.

Projects

Fake News Detection System
Tech Used: Python, Scikit-learn, NLP, Flask

- Developed a machine learning model using NLP to classify news articles as fake or real.
- Implemented TF-IDF vectorization and logistic regression for accurate prediction.
- Deployed the model using Flask and created a simple web UI for users to verify articles.

ChatPDF System
Tech Used: Python, PyMuPDF, LangChain, Deepseek API, Streamlit

- Developed a tool that allows users to upload PDF documents and interact with them through an AI-powered chat interface.
- Implemented OCR and NLP techniques to extract, understand, and respond to user queries about PDF content.
- Integrated LangChain and Deepseek API to generate context-aware answers, enabling dynamic document conversations.

AIoT-Based Accident Alert System

Tech Used: ESP8266, MPU6050, Python, Firebase, Twilio

- Designed a real-time accident detection system using motion sensors and machine learning.
- Integrated ESP8266 with MPU6050 to capture movement anomalies and send data to Firebase.

AI-Powered Climate Control for Smart Greenhouse

Tech Used: ESP8266, DHT11, BMP280, Python, Firebase, ML

- Built an automated system that adjusts greenhouse conditions based on crop requirements.
- Developed an ML model to recommend optimal temperature, humidity, and light levels.
- Controlled devices like fans, lights, and pumps using real-time data and AI predictions.

Image Color Palette Extractor

Tech Used: Python, OpenCV, K-Means Clustering

- Created a tool that extracts dominant colors from images using unsupervised learning.
- Used OpenCV for image processing and K-Means for clustering pixel data into color palettes.
- Displayed color codes and preview swatches for use in design and UI projects.

Certifications

Successfully completed the **Python Essentials** course from Cisco, demonstrating proficiency in fundamental programming concepts and Python syntax

Achievements

- Won first prize in **"PyCraft"** a department-level event for Python development.
- Secured a top position in a department-level Hackathon focused on IoT devices.