

Pavani Bandireddy

pavanibandireddy04@gmail.com • +91 9391256531 • Anaparthi, Andhra Pradesh, India

Career Objective

Dedicated embedded engineer with a strong foundation in developing and optimizing firmware for embedded systems. Proficient in C, microcontroller, hardware software integration seeking to leverage technical skills and problem solving abilities to contribute to innovative projects in a dynamic engineering environment.

Education

Bachelor of Technology in Electronics and Communication Engineering

Rajiv Gandhi University of Knowledge Technologies IIIT Srikakulam

CGPA: 8.9

Jun 2021 – May 2025 — Srikakulam, India

Pre-University Course

Rajiv Gandhi University of Knowledge Technologies IIIT Srikakulam

CGPA: 9.4

Jun 2019 – May 2021 — Srikakulam, India

Board of Secondary Education

S.R.Z.P.P High school

CGPA: 10.0

Jun 2018 – Mar 2019 — Anaparthi, India

Technical Skills

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| • Digital Electronics | • RISC-V Processor |
| • Analog Electronics | • System-on-Chip (SoC) Design |
| • C Programming | • IOT |
| • Basics of Verilog | • ASIC Design Flow |
| • Python | • Embedded Systems |
| • Micro processors | • Microcontrollers |
| • Communication Protocols(UART, SPI,I2C,RS232,RS422,RS485) | • Basics Of RTOS |
| • Basics of Networking and protocols like TCP/UDP. | • Basics of APIs |
| • PCB Design | • Tools: Matlab, Kicad |
| • Quantitative aptitude | • Logical reasoning |

Soft Skills

- Critical Thinking
- Innovative
- Team Leadership
- Problem-Solving

Projects

Fake news detection using ML(Python) (March 2024-May 2024)

Fake news detection involves using algorithms and machine learning to identify and filter out misleading or false information. It analyzes content patterns, sources. This technology helps to stop spreading of misinformation online.

Smart parking systems using IOT (Jan 2024 - Mar 2024)

Smart parking systems use sensors and IoT to track available spaces, helping drivers find spots quickly. They often include mobile apps, automated payments, and dynamic pricing for enhanced convenience and efficiency.

Fire Detection Using FPGA Basys3 Board (2024)

Developed a fire detection system using FPGA on the Basys3 board, integrating flame sensors for real-time monitoring. Implemented Verilog-based signal processing for rapid detection with minimal latency. Optimized hardware utilization for efficient ASIC and FPGA deployment.

Arduino based fancy controller (Sept 2023 - Nov 2023)

An Arduino-based fancy light controller uses microcontrollers to program and control lighting effects, such as color changes and patterns. It can be customized with sensors or apps for interactive and dynamic lighting experiences.

Sign language LCD display (Sept 2024- November 2024)

This project translates sign language gestures into text using a sensor-based input system. The recognized text is displayed on an LCD, enabling communication between sign language users and others

IOT health monitoring system (Apr 2024-June 2024)

Developed a system to measure heart rate and oxygen levels using a pulse oximeter sensor, with real-time data visualization on a mobile app. Integrated alert notifications via SMS or email for abnormal reading

IOT-Based Industrial safety system(Nov 2024- Dec 2024)

Designed a system to monitor gas leakage and temperature in real-time using IoT sensors, ensuring workplace safety. Implemented emergency alert notifications through an IoT cloud platform to notify concerned personnel immediately.

InternShip Experience

IGNITED MINDS (May 2024-June2024)

This internship provides a clear understanding on PCB (printed circuit board) and conceptualized microcontroller architecture, hardware and software design.

S2TECH (July 2022-Aug 2022)

S2Tech is an organization which is collaborated with abroad companies and the main motto of this internship is to increase the communication skills in students. In this had received 10000 cash prize and certificate.

Certifications

System on Chip (SOC) - Maven Silicon (Jan 2025)

Practical expertise in RTL design, verification, synthesis, and physical design using industry-standard EDA tools.

Embedded Systems - Maven Silicon (Jan 2025)

Overview of embedded systems and practical examples, Architecture , Software development in embedded systems, Embedded C.

RISC-V Processor - Maven Silicon (Feb 2025)

Proficient in RISC-V architecture, ISA, pipeline design, and verification using Verilog and industry-standard EDA tools.

Got a certificate from S2Tech internship (2022)

S2Tech is an organization which is collaborated with abroad companies and the main motto of this internship is to increase the communication skills in students. In this had received 10000 cash prize and certificate.

Embedded systems certificate from ignited minds (2024)

I learned about PCB design fundamentals, including schematic creation, component placement, and routing techniques. I also explored designing multi-layer PCBs and optimizing layouts for signal integrity and efficient power distribution.

Certificate of Python from ignited minds (2022)

In the Ignited Minds internship, I learned Python programming, covering file handling, and basic machine learning applications.