

PRASHANTH KUMAR P

EMBEDDED ENGINEER

📍 Hyderabad, Telangana

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SUMMARY

Detail-oriented Embedded Engineer with over 1 year of hands-on experience in end-to-end product development, from hardware-software integration to field deployment. Skilled in designing, testing, and debugging embedded solutions. Proven track record in developing reliable firmware, performing system validation and delivering product demonstrations to stakeholders.

PROFESSIONAL EXPERIENCE

Embedded Engineer, RE4BILLION.AI May 2024 - Present

- Designed and developed 24v DC and 48v DC **Smart- Remote Monitoring System (SRMS)**
- Provided end-to-end guidance on the development of the S-RMS product, from initial concept through to final deployment.
- Led risk management activities including **QFD mapping, FMEA, and FTA** to ensure product reliability and alignment with customer requirements throughout the development process.
- Spearheaded the design and implementation of an **AI-based irrigation system** for 1-acre farms, enabling precise monitoring and improved crop yield.
- Contributed to product demos and pitch presentations for stakeholders, investors, and grant evaluations during innovation challenges.

Embedded Software Intern, Vector India Nov 2023 - April 2024

- Built and tested key data structures in C (e.g., **linked lists, trees, sorting algorithms**) to support modular and optimized code in internship projects.
- Experienced in writing and executing code via the **Ubuntu** terminal with familiarity in Linux-based development environments.
- Hands-on experience programming and interfacing with microcontroller platforms including **ARM7, 8051, and 8086** during internship projects.
- Completed a project on real-time applications of the **CAN protocol**, involving engine temperature display, reverse alert system, and door glass window control during internship.

Industrial Trainee, Lampex Electronics Nov 2019 - April 2020

- Diagnosed and resolved PCB issues using appropriate testing equipment and tools.
- Performed functional testing and quality checks on products and sub-assemblies.
- Collaborated with team members to meet production targets and deliver within tight deadlines.

TECHNICAL SKILLS

- ➔ **Programming Languages:** C, C++, Assembly, Python
- ➔ **Embedded Systems:** Microcontrollers (8051, 8086, ESP32, ARM LPC2129), Real-Time Systems, Communication Interfaces (SPI, I2C, UART), PCB Design, Control Systems, IoT
- ➔ **Debugging Tools:** Oscilloscope, Signal Generator, Multimeter, Logic Analyzer
- ➔ **Design Tools:** Keil uVision, Arduino IDE, Eagle, KiCad, HQDFM, LTspice, Canva, Ubuntu
- ➔ **Product Development Tools:** QFD, FMEA, Version Control (Git), FTA

EDUCATION

- **Malla Reddy Institute of Technology & Science - Bachelor of Technology**
Electronics & Communication Engineering
2020-2023, 7.0 GPA
- **RRS College of Engineering & Technology - Diploma**
Electronics & Communication Engineering
2017-2020, 8.5 GPA
- **Sri Bhashyam High School - SSC**
2016-2017, 8.5 GPA

CERTIFICATIONS

- Python Programming Certification from Cognitive.AI provided by IBM
- Industrial Trainee Certification from Lampex Electronics
- Crash Course Certification in Electronics and PCB Design - Udemy
- Excel Tips and Tricks Certification from Great Learning Academ

ADDITIONAL INFORMATION

- **Languages Known** : English, Hindi, Telugu,
- **Address** : Villa No: 661, Symphony Park Homes, Beeramguda, Rangareddy District, Telangana