Shreenidhi Vedpathak

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Pimpri-Chinchwad-Pune | Linkedin | GitHub | Portfolio

Brief Summary

Detail-oriented and innovative Electronics and Telecommunication Engineer with hands-on experience in embedded systems design, R&D, and CMOS memory design. Specialized in high-speed, low-power memory systems and embedded systems design using advanced programming techniques. Passionate about driving technical advancements in microcontroller programming, EDA tools, and memory design. Adept in problem-solving, collaborative teamwork, and leading engineering projects to completion.

key expertise

Semiconductor Development, Clean Room Operations, CMOS Memory Design, Embedded Systems, Sensors & Automation, Signal Systems, Nano Technology, Data Analysis, Research & Development, C++, Python, MATLAB

Education

Dr. D Y Patil Institute Of Technology Pimpri — Pimpri-Pune
B.E In Electronics & Telecommunication CGPA: 8.02 — 2021 - 2025

Professional Experience

- **ISRO(Indian Space Research Organization) | Intern** — **Hyderabad| Aug 2024 - Present**

  Collaborating on India's first-ever lightning prediction and detection project, applying AI and advanced technology systems.

  Analyzing and processing remote sensing data, improving predictive models, and enhancing detection accuracy using cutting-edge data analysis techniques.

  Gaining hands-on experience in embedded systems and data-driven research to optimize real-time system performance.

- **BARC(Bhabha Atomic Research Centre) | Intern** — **Mumbai, India | Mar/2024 - May/2025**

  Developed and tested an embedded systems board for radiation monitoring, covering microcontroller programming, EC-circuit design, and component selection. Applied data analytics to optimize Bill of Materials (BOM) management.

  Worked in an agile environment to deliver scalable, fault-tolerant solutions for real-time radiation monitoring, emphasizing performance, cost-efficiency, and reliability.

  Gained hands-on experience in quality assurance engineering, applying QA methodologies and tools. Conducted UI and API automation testing using Selenium and SOAPUI, and performed rigorous testing on embedded devices to ensure functionality and safety compliance.

Skills

Programming Languages: C++, Python, Html, CSS, JavaScript, SQL

Libraries/Frameworks: Pandas, NumPy, Matplotlib, Seaborn, Power BI Desktop, DAX (Data Analysis Expressions), Power Query (M language), Power BI Service, Excel, Tableau, Flask, Django

New Technologies: CMOS Memory Design: SP SRAM, DP SRAM, Register File, ROM, Embedded Systems Design & Development : Low Power Design & High-Density Architectures
Programming Languages: C++, Python, C-Shell, Perl, JavaScript
Data Analysis & Statistical Modeling: Excel, SQL, Power BI AI & Machine Learning: Data-driven solutions, predictive models
Project Management: Agile methodologies, team leadership

Projects / Open-Source

- **Lightning Detection System using Ground | Link** **Sensor Networks Embedded Systems AIML**
  Key Skills: Remote Sensing Data Engineering Developed a CNN-based prediction model utilizing VLF and VHF sensor data to detect lightning events. Implemented real-time data analysis workflows to support disaster management strategies.

- **Student Information Management System | Link** **Embedded Systems, IOT**
  "Engineered a Student Information Management System to manage academic records, using HTML, CSS,JavaScript, and PHP. Implemented real-time updates, secure data storage, and user-friendly interfaces, emphasizing strong backend integration and web security, crucial for large-scale cloud infrastructure projects."

- **Ionic Thruster System For Satellites** **Embedded Systems, Aerospace Eng**
  "Collaborated with Bennett University and Sunsera Aerospace Engineering to design an ionic thruster propulsion system for satellites. Focused on optimizing system performance and improving orbital stability,utilizing electronic and mechanical integration. This aligns with embedded systems and hardware-softwareinteraction in engineering roles."

- **Alcohol Detection System For Vehicles** **Embedded Systems, Automobile**
  "Developed an embedded system to detect alcohol levels in vehicles, utilizing sensors and microcontrollers.The system improves road safety by preventing vehicle operation when intoxicated. This project demonstrates proficiency in hardware-software integration and IoT solutions, valuable for automation and safety systems in engineering roles."

Certifications

- STM32 Microcontroller Programming- STM32
- Google Data Analytics Professional Certificate - Google
- Data Structures And Algorithms In C/C++ - Udemy
- Network Technician Career Path By Cisco - Cisco
- Microchip Semiconductor chip manufacturing In 10k Clean Room by KBCNMU - KBCNMU
- MATLAB Onramp Simulation Course By Mathworks, training, and service – MATLAB

Honors & Awards

- Won IEEE YESIST Competition In Innovation and Development
- Ranked 1st In college level hackathon for Innovation and Development
- Ranked 3rd In IIT Tech Fest for project Alcohol Detection System In Vehicles. Using STM32
- Working on an Industrial sponsored project for BE (4th year)

***** For All projects and certifications visit portfolio https://portfolio-shreenidhi.vercel.app/**