

Kushal BS

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EDUCATION

Dayananda Sagar College of Engineering, Bangalore Bachelor of Engineering in Electronics and Telecommunication Engineering Coursework: VLSI, Java, IoT, Python	Bengaluru, IN Nov 2023 - Present
Siddaganga Polytechnic Tumkur Diploma in Electronics and Communication – CGPA: 9.30 Coursework: IoT, Industrial IoT, Embedded Systems	Tumakuru, IN Nov 2020 - Jul 2023
Shubhodaya English School SSLC – Percentage: 70	Gubbi, IN Jul 2020

PROFESSIONAL EXPERIENCE

Bluestock Fintech (Internship) Full-Stack Web Development <i>Project Intern</i> Built a full-stack web application using React, Node.js, Express, and MongoDB for managing IPO listings and user authentication and designed responsive frontend with React Router and Tailwind CSS; implemented secure backend RESTful APIs for registration, login, and IPO data handling.	Remote May 2025 – June 2025
New Wave Technologies (Internship) IoT, Raspberry Pi, Arduino, PCB Design <i>Project Intern</i> Worked on Arduino, Raspberry about its functionalities and how it can be connected to the IoT and Developed a solution for detecting cracks in metal pipes in pipe manufacturing industry.	Tumakuru, IN June 2024 – August 2024

PROJECTS

AI-Enhanced Dynamic Instruction Scheduling in MIPS Pipeline <i>Python, Q-Learning, MIPS</i> Built a cycle-accurate MIPS pipeline simulator and integrated a Q-learning-based scheduler to reduce stalls and improve instruction throughput, achieved an 18.7% increase in IPC and 12.8% reduction in energy consumption compared to in-order execution, designed a reward function to optimize both performance and power efficiency by balancing retired instructions with pipeline stall penalties, evaluated performance across diverse workloads, with up to 42.5% reduction in data hazards and notable gains in control-heavy programs.	Feb 2025 – Jun 2025
Asthma Patient Vital Signs Monitoring and Indication System <i>RP2040, Node-red, IoT, RTOS</i> Developed a wireless and wearable system to continuously monitor vital signs of asthma patients and securely upload the data to the cloud in real-time, implemented alerts for both patients and doctors to notify them when vital signs deviated from the normal range, facilitating timely interventions, designed and developed a user-friendly dashboard for visualizing patient information in real-time, enabling healthcare professionals to monitor patient health remotely and storage of real-time generated data in the cloud for future analysis and reference.	Apr 2023 – Jul 2023

CERTIFICATIONS

What Is Generative AI LinkedIn Learning Community	Jul 2025
Python Programming National Skill Development Corporation	Feb 2025
Embedded for Beginners National Institute of Electronics & Information Technology (NIELIT)	Oct 2024
IoT (Internet of Things) Wireless & Cloud Computing Emerging Technologies Yonsei University	Nov 2022

SKILLS

Technical Skills: Python, C, C++, Verilog, MATLAB
Tools & Platforms: Git, VS Code, Postman, MongoDB Compass, Arduino IDE, Node-RED
Core Concepts: Object-Oriented Programming (OOP), Real-Time Systems, Cloud Integration, Reinforcement Learning

Volunteering

Event Organization: Organized the inauguration event for the Zesty Beanz R&D Lab.
Technical Workshops: Conducted workshops on IoT and Embedded Systems.