

Nimish Sabnis

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EDUCATION

University of Colorado Boulder, MS in Electrical & Computer Engineering, GPA: 3.5 May 2026

- Relevant Coursework: Network Systems, Wireless local Area Networks, Low-power embedded system design, Advanced Computer Architecture, Principles of Embedded Software, Mastering Embedded Systems Architecture, Data center Scaling

D J Sanghvi College of Engineering, B.Tech in Electronics and Telecommunication Engineering, GPA: 8.81 Jun 2024

- Honors in Intelligent Connectivity: 5G & IoT
- Relevant Coursework: Operating System, Data structures & Algorithms, Digital Circuit Design, Radiating Systems

TECHNICAL SKILLS

Programming Languages: C/C++, Python, bash

Software / Tools: Github Actions, pytest, Jenkins, Linux, Git, SVN, JIRA, Keil, Simulink

Technical Expertise: CI/CD, RTOS, BLE, UART, SPI, I2C, GPIO, Ethernet, JTAG

Hardware: ARMv7 Cortex M4, ARMv8 Cortex A72, Ultrascale RFSoc, Silicon Labs EFR32

PROFESSIONAL EXPERIENCE

Firmware Engineering Intern May 2025 – Aug 2025
Litepoint (A Teradyne company) San Jose, CA

- Developed Python scripts to test different DUTs, enabling repeatable system-level validation for wireless devices.
- Used CI/CD pipelines with Jenkins to automate test execution, accelerating DUT bring-up and debug by 30%
- Developed regression framework for conformance testing using pytest for Litepoint's new products leveraging SPI
- Collaborated with firmware and hardware engineers to debug RF-level issues, shortening root-cause isolation by 25 %

Research Assistant Nov 2024 – May 2025
University of Colorado Boulder Boulder, CO

- Implemented Precision Time Protocol on Ultrascale FPGA platform using Linux, achieving nanosecond-level time precision.
- Configured a Linux kernel with a real-time patch for better real-time performance reducing latency by 40%
- Developed a bash configuration script for GPS based servers and Linux systems, enhancing synchronization by 90%

Graduate Teaching Assistant Aug 2025 – Present
University of Colorado Boulder Boulder, CO

- Mentored 15+ students in developing event-driven firmware for BLE based microcontroller reducing latency by 10%
- Designed a Jenkins CI pipeline to compile, execute, and auto-grade C-based assignment, reducing manual grading by 90%.

PROJECTS

QNX based VoIP Gateway Design Nov 2025 – Dec 2025

- Evaluated ARM Cortex A-72 for VoIP Gateway deployment by booting QNX validating Ethernet access, confirming stable operation with 11 MB IFS + 2.4 GB system image
- Implemented G.711 codec in C on QNX using Momentics IDE, achieving 100% successful decoding of reference audio files
- Integrated and configured an Asterisk IP-PBX on Linux by setting up voicemail achieving 100% voicemail call using Zoiper

Vortex Flowmeter Embedded System Aug 2025 – Nov 2025

- Developed a FreeRTOS-based system using ARM Cortex M4 to manage operations, reducing latency to under 1ms
- Integrated SPI and I2C peripherals using HAL APIs for sensor communication and data transfer improving efficiency by 40%
- Simulated a bare-metal vortex frequency-detection algorithm in MATLAB Simulink and ported it to C on the STM32, achieving accurate 40 Hz flow-rate computation and 98% CPU utilization efficiency under noisy test conditions

Smart Temperature Monitoring System using Statemachine Apr 2025 – May 2025

- Built a bare metal temperature monitoring system on an STM32 microcontroller, reading sensor data with ± 1 °C accuracy
- Implemented a state machine in embedded C to manage data transfer, reducing logic errors by over 90%
- Designed UART command interface for dynamic threshold control, improving response precision by 35%

PUBLICATIONS

- [IoT enabled smart Healthcare system with machine learning for real time vital sign monitoring and anomaly detection](#)