Devanshu Sanjiv Gajjar

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SUMMARY

Dynamic and result oriented Electrical Engineering graduate student, specializing in VLSI with two years of professional experience in embedded application development and post silicon validation engineering. Proficient in designing and implementing embedded solutions, optimizing systems to industrial standards as well as skilled in validating and verifying SoC designs and systems. Possesses strong technical skills in languages such as C/C++, Python and Verilog coupled with solid understanding of hardware design principles and literature reviewing capabilities for state-of-the-art technologies.

EDUCATION

San Jose State University, Master of Science in Electrical and Electronics Engineering **San Jose, CA | Jan 2024 – Dec 2025**

Nirma University*,* Bachelor of Technology in Electronics & Communication Engineering **May 2021**

*Courses***:** *Fiber Optic Communication, Digital Communication, Data Structure, Elements of Management, Modern Processor Architecture*

WORK EXPERIENCE

Einfochips Pvt Ltd, India **| Embedded Engineer** **Aug 2021 – Dec 2023**

- Created an embedded application and firmware for a battery management system integrated into a security system, utilizing an ARM Cortex M4 and A7.
- Programmed and verified different protocols such as I2C, SPI, and UART on the STM32L475 Discovery Board with ARM Cortex M4 using BareMetal coding.
- Also, implemented a finite state machine for SPI to simulate individual block functionality using System C.
- Developed an application for the FTDI FT2322H (USB 2.0 to JTAG Convertor) using the PyFTDI module in Python.
- Successfully implemented the JTAG protocol using RPI Pico, resulting in a cost reduction of 50% for customers while maintaining the same functionality with more affordable technology.
- Created an embedded application for communication and debugging over serial wire JTAG offering different functionality on the ARM SoC 600.
- Embedded Application and Driver development on Renesas RX65n microcontroller and porting from Renesas RX231 to RX65n.

Dynemix India Engg Pvt Ltd, India **| Project Intern** **Jan 2021 – May 2021**

- Undertook an internship focused on automating a specific aspect of the company's wastewater management process by utilizing PLC and IoT technologies, in accordance with the industry 4.0 Standard.
- The automation system incorporated with sensors for collection of data, and RS485 as communication protocol with capability of cloud computing, leading to a significant 25% reduction in pollutants.

Moba Mobile Automation Pvt Ltd, India **| Summer Intern** **June 2020 – July 2020**

- Implemented IoT Data Handling and Data Error Detection by collecting data from various remote locations incorporated with sensors and cloud computing, and data visualization to check for unusual data patterns.

ACADEMIC PROJECTS

Autonomous Under Water Vehicle **Aug 2020 – Dec 2020**

Dr. D.K. Kothari, Nirma University

- Designed a self-propelled autonomous underwater vehicle using a ROS (Arduino Mega) and image processing (Nvidia Tx2).

SKILLS & COMPETENCIES

Programming Languages: C, C++, Python, System C, Shell and Bash Scripting, GIT, Verilog, System Verilog, VHDL.
Hardware Technologies: STM32, Renesas RX231, RX65n, FTDI FT2322, ARM Cortex M4, A7.
Software: MATLAB, STM32 Cube IDE, Vivado (Xilinx), Quartus (Intel), Proteus, NI Multisim, Verdi.
Instruments: Saleae Logic Analyzer, ST-Link, Aardvark, Spectrum Analyzer.

PUBLICATIONS

Devanshu Gajjar, Divyesh Sankhla, Jagrat Jhamb, Industrial Automation Using PLC, and IoT Advancements, IJERT,2021 (Manuscript Accepted)

CERTIFICATIONS

- **BASH, CPP, GIT, Linux, C Training** by Ganpat University **Aug 2021**
- **AWS Academy Cloud Foundations** by AWS Academy **July 2021**