**ENRIQUE RODRIGUEZ**

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**TECHNICAL SKILLS**

**Programming Languages:** MIPS Assembly, C, C++, Python, JavaScript, Verilog

**Hardware & Tools:** PCB Design (Easy EDA, KiCad), LTSpice, Vivado, FreeRTOS

**Cloud & DevOps:** Amazon Web Services (AWS), Git, VS Code

**Embedded & DSP:** Embedded Systems, Signal Conditioning, Analog/Power Circuit Design, Digital Signal Processing

**Protocols & Interfaces:** I2C, UART, SPI, MQTT, REST API

**EDUCATION**

**San Diego State University San Diego, CA**

Bachelors of Science in Computer Engineering; GPA: 3.6 September 2021 - May 2025

**PROJECTS/OPEN-SOURCE**

**Noise Attenuation System** August 2024-Present

**Technologies: DSP, Signal Conditioning, Circuit Simulation, PCB design**

* Engineered PCB layouts and schematics for audio signal conditioning (pre-ADC).
* Simulated performance with LTSpice to refine component choices and validate design parameters.
* Developed preliminary DSP algorithms (e.g., FFT, IIR) for planned deployment on STM32.
* Employed structured testing procedures (simulation, prototyping) to confirm design reliability.

**ESP32 Plant Monitor and iOS Companion App** July 2024-December 2024

**Technologies: ESP32, MQTT, React Native, Free-RTOS**

* Created hardware schematics and PCB layouts integrating sensors and power management on ESP32.
* Employed MQTT for real-time data transmission, with rigorous testing to ensure system reliability.
* Incorporated version control (Git) for firmware revisions and code reviews, demonstrating basic knowledge of pull request workflows.
* Developed an iOS companion app (React Native) for remote monitoring.

**EXPERIENCE**

**Logistics Support Analyst**  August 2021-March 2022

*Oceaneering International, Inc. (OII)*  San Diego, CA

* Coordinated procurement and logistics for critical hardware components, including end-of-shelf/end-of-life items, ensuring quality and traceability.
* Maintained detailed documentation and records to support quality control and continuous process improvement.
* Facilitated effective cross-team communication, demonstrating strong interpersonal skills and the ability to adapt to changing project priorities.

**Asset Manager**  October 2017-October 2021

*United States Marine Corps (USMC)*  Various Locations

* Oversaw maintenance, repair, and lifecycle management of critical assets, ensuring operational readiness and high quality standards.
* Managed the disposition of obsolete and end-of-shelf items, optimizing resource allocation and reducing waste.
* Collaborated with diverse teams under pressure, highlighting strong teamwork, attention to detail, and time management skills.