

# Morgan Reyes

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## Education

University of California, San Diego, CA

Bachelor of Science in Computer Engineering

Graduation: June 2024 | GPA: 3.65/4.0

Relevant Coursework: Digital Systems Design, Advanced Embedded Systems, Microelectronics, FPGA Design

## Experience

Hardware Engineering Intern | Qualcomm | Summer 2023

- Designed and tested high-speed digital circuits for SoC validation boards
- Created schematic and PCB layouts using Altium Designer for RF front-end testing
- Assisted in signal integrity analysis and oscilloscope-based validation

Undergraduate Research Assistant | UCSD Embedded Systems Lab | Jan 2023 - Present

- Developed firmware for STM32 microcontrollers used in custom wearable health devices
- Interfaced analog sensors and implemented low-power data acquisition systems
- Contributed to the design and testing of custom PCBs for ARM-based platforms

## Technical Skills

- Hardware: Oscilloscopes, Logic Analyzers, Multimeters, STM32, ESP32, FPGAs (Xilinx), RF Modules
- Tools: Altium Designer, KiCad, LTspice, Vivado, STM32CubeIDE, MATLAB
- Programming: C, C++, Python, Verilog, VHDL
- Protocols: SPI, I2C, UART, CAN, USB, BLE

## Projects

Modular FPGA-Based Signal Analyzer

- Built a compact signal analysis system using a Xilinx Artix-7 FPGA
- Designed Verilog modules for FFT computation and real-time UART data streaming
- Implemented a custom PCB for ADC input, voltage regulation, and JTAG programming

## Soft Skills

- Detail-Oriented
- Collaboration in Lab Environments

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- Documentation & Reporting
- Problem-Solving Under Pressure