

William “Chase” Quijano

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U.S Citizen/Security Clearance Eligible

Education

Rowan University Henry M. Rowan College of Engineering, Glassboro, NJ

Expected May 2027

B.S. Engineering Entrepreneurship, **Minor in Mechanical Engineering – Eagle Scout**

Recent Coursework: Quality and Reliability in manufacturing and design, Material Science and Manufacturing, Applied Product Development

Selected Technical Projects & Systems

Exoskeleton IMU & Control System

Rowan University

- **Independently developed** an **8-IMU gait analysis platform** with **custom PCBs** (TCA9548A + BNO055), Raspberry Pi interface and logging code (Python), and a cooled enclosure; used it to record gait data for ongoing exoskeleton studies.
- **Designed a dual-ESP32-S3 control mainboard** to provide **real-time, high-reliability actuation** and monitoring of **16 pneumatic cylinders** via solid-state relays, with a safety MCU for current/temperature monitoring and emergency shutdown. **increasing system robustness** and preventing hardware damage; wrote firmware, designed the enclosure, and wired the full system.

Modular Soft-Robotics Platform

Rowan University

- Co-developing a modular soft-robotics platform of interlocking actuator modules with an M.S. student; responsible for the electronics subsystem and custom mainboard PCB.
- **Independently designed and assembled the mainboard integrating multi-channel motor drivers, I²C multiplexers, on-board flex sensing, and power distribution**, enabling interlocking modules to be driven and sensed from a single controller and serving as the core electronics platform, **significantly reducing system complexity** while **increasing reliability** for ongoing soft-robotics experiments and a **forthcoming publication**.

(For more engineering documentation go to: chasequijano.com)

Engineering & Leadership Experience

Mechanical Engineering Intern – Subaru of America

Camden, NJ

May 2025 – Present

Developed and validated **fault-switch modules for vehicle training systems**, performing hardware troubleshooting and bench testing; **significantly improved technician training reliability** by producing detailed **wiring diagrams** and test documentation

President – Society of American Military Engineers (SAME)

Rowan University, Glassboro, NJ

2025 – Present

- **Revitalized a dormant chapter** by rebuilding the officer team, restarting meetings, and centering the group on a **long-range reconnaissance UAV**; increased membership and initiated funding efforts.
- **Lead a cross-disciplinary team** designing the UAV and **own the electronics and hardware architecture** (power distribution, sensors, telemetry).

Undergraduate Researcher & Project Lead – Exoskeleton & Soft Robotics Labs

Rowan University, Glassboro, NJ

Jan 2024 – Present

- **Lead the exoskeleton research effort**, assigning tasks, tracking progress, and coordinating with the clinic advisor and an M.S. collaborator on experiments and **publication milestones**.
- Responsible for **integrating the exoskeleton IMU/control hardware** and the **modular soft-robotics mainboard** into test benches and experiments for actuator characterization and gait studies, building on prior published work from the lab and **supporting a forthcoming co-authored paper**.

Skills

Mechanical & Product Design: SolidWorks, Fusion 360, CAD for manufacturability, 3D printing (FDM/SLA), laser cutting, CNC, Lathe

Electronics & Embedded Systems: KiCad, PCB design, ESP32/Teensy, IMUs, current sensing, power distribution, solid-state/relay drivers

Software & Tools: Python, C++, ROS/ROS2, Linux/Raspberry Pi, Git/GitHub