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 – Mechanical Track • GPA: **3.20 / 4.00** (upward trend)

Tracking Dual MS Engineering / MBA (Fall 2027) • **Eagle Scout**

Core Coursework: Calculus III, Quality & Reliability in Design, Material Science, Applied Product Development

High-resolution engineering documentation, CAD models, schematics & video validation loops: chasequijano.com

Engineering & Industry Experience

Mechanical Engineering Intern – Subaru of America **Camden, NJ** | *May 2025 – May 2026*

- Designed, hand-wired, and deployed a fleet of remotely accessible in-vehicle telematics modules for technician fault-switching training environments.
- Built a distributed node network of high-power MOSFET switching matrices to safely toggle live vehicle wiring harnesses inline under continuous load.
- Engineered a secure web-based UI hub enabling remote administrators to access, monitor, and configure the physical vehicle node network.

Academic Research & Systems Integration

Engineering Clinic Lead – Fall Prevention Exoskeleton **Rowan University** | *Jan 2024 – Present*

- Engineered a wearable 8-node motion-capture telemetry array over a full-duplex RS485/UART transceiver matrix, preserving signal integrity and eliminating EMI across dynamic, human-scale cable runs.
- Routed custom Teensy-based mainboards aggregating high-frequency BNO085 IMU data streams to a Raspberry Pi gateway for real-time predictive gait detection.
- Validated real-time position profiling via parallel string potentiometers, 4 pressure transducers, and load cells across a rigorous 200+ trial Hardware-in-the-Loop (HIL) pneumatic control test matrix.
- Scoping low-level electronics architecture and multi-channel current-regulation circuitry for an upcoming neuromuscular electrical stimulation (NMES) integration to restore functional motor control.

Undergraduate Research Grant Recipient – Medical Device & Patch Development **Rowan University** | *May 2026 – Present*

- Co-developing microelectronics integration and custom physical architectures from scratch for a new wearable medical patch initiative alongside a Chemical Engineering M.S. collaborator.
- Designing low-level embedded hardware to systematically regulate electrical current configurations through electro-responsive hydrogels, validating controlled transdermal drug delivery.

Undergraduate Researcher – Self-Reconfiguring Soft Robotic Modules **Rowan University** | *May 2024 – Present*

- Iterated 3 generations of custom flexible PCBs engineered to withstand extreme mechanical strain and high-angle bending without trace delamination.
- Integrated dynamic I2C multiplexing and structural addressing onto individual docking faces, enabling interlocking actuator modules to autonomously discover and map neighboring orientation nodes.
- Embedded localized motor drivers and transistor-driven solenoid arrays on-board to manage autonomous module interlocking and soft-actuator inflation cycles; supporting 1 forthcoming co-authorship.

Engineering Leadership

President – Society of American Military Engineers (SAME) **Rowan University** | *Sep 2025 – Present*

- Revitalized a dormant chapter by recruiting a cross-disciplinary student officer board and rebuilding faculty executive connections.
- Authored a winning technical proposal securing a $3,500 grant from the SAME Philadelphia Post to design and build a 7-ft-wingspan composite fixed-wing UAV, directing electrical and power-distribution subframe architectures.

Technical Skills

Mechanical Design & Fab: SolidWorks, Fusion 360, DFM, Waterjet, 3D Printing (FDM/SLA), Laser Cutting, CNC, Mill/Lathe, Parametric Modeling

Electronics & Systems: Altium Designer, Flexible PCB Routing, Multilayer Design, Signal Integrity (RS485/UART/I2C), DAQ, MOSFET Arrays, SSR Drivers, HIL Testing

Embedded Software & Tools: C++, Python, ROS/ROS2, Linux, Raspberry Pi, Git/GitHub, Deterministic Hardware Timers, Interrupts (ISRs)