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: **3.3 / 4.0** (upward trend)
Tracking Dual MS Engineering / MBA (Fall 2027) • **Eagle Scout**
Core Coursework: Quality & Reliability in Design and Manufacturing, Applied Product Development

Portfolio includes CAD models, PCB schematics, and hardware test videos: 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 training environments.
- Designed high-power switching circuits: Used MOSFET switching boards to safely interrupt and toggle live vehicle wiring harnesses while carrying continuous electrical loads.
- 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 system: Built over a full-duplex RS485/UART transceiver matrix using shielded 2-meter flexible cables to eliminate signal noise during human trials.
- Routed custom Teensy-based mainboards aggregating high-frequency BNO085 IMU data streams to a Raspberry Pi gateway for real-time predictive gait detection.
- Executed system-level hardware/software integration and validation testing: Ran 192 total trials using string potentiometers, pressure transducers, and a single load cell across hip abduction and knee extension setups within a Hardware-in-the-Loop (HIL) pneumatic 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 custom electronics and microfluidic/wearable enclosures for an electro-responsive transdermal drug delivery patch alongside a Mechanical Engineering M.S. collaborator.
- Developing 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 4 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 $4,640 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)