

John Jarufe

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Education

University of Central Florida

Expected Graduation: December 2027

Bachelor of Science in Mechanical Engineering

Orlando FL

- Relevant Coursework: Dynamics, Statics, Solid Mechanics, Thermodynamics, Modeling Methods, Machine Design, Principles of Electrical Engineering, Structure and Properties of Materials.

Projects

Automated aquarium monitoring and control system.

- Designed, programmed, and built a fully automated aquarium monitoring and control system to reduce manual maintenance, minimize system downtime, and maintain stable water conditions to reduce stress in aquatic life.
- Integrated **ESP32 microcontrollers** to interface with **10+ sensors/probes** and control **8 electrical and mechanical devices** including pumps, relays, and solenoid valves.
- Implemented automated functions including **water changes, reservoir filling, device control, fluid transfer** and **real-time sensor monitoring** through local touchscreen interfaces and remote web-based control.
- Designed custom system components and enclosures using **SolidWorks** and **Fusion 360** for **3D printing** and integration with electrical and plumbing systems.
- Developed a **React**-based remote monitoring and control dashboard using **AWS API Gateway** to manage WebSocket communication, **AWS Lambda** to process commands and backend logic, and **DynamoDB** to store system and connection data.

Technical skills

CAD: SolidWorks, Fusion 360.

Programming/Technical: C++, C, Python, MATLAB.

Embedded systems & electronics: ESP32, Arduino, sensors, circuit design and prototyping, soldering, electrical troubleshooting.

Fabrication: 3D printing, power tools, stick welding, electrical wiring, plumbing.

Work experience

Casablanca Renovations

September 2023 - November 2025

Project Manager/ Painter

Gainesville, FL

- Led a team of 4 employees to complete residential renovation and painting projects while maintaining quality standards and timelines.
- Prepared estimates and invoices outlining labor, materials, and scope of work for customers.
- Supervised site safety practices and compliance with OSHA workplace procedures.

Meldon Law

August 2024 - November 2025

Event activation specialist

Gainesville, FL

- Coordinated event setup, merchandise organization, and customer flow to improve efficiency and reduce wait times.
- Managed inventory and ordered merchandise from suppliers based on projected event requirements.
- Transported, loaded, and unloaded event materials and equipment using company vehicle.

Towne Park/UF Health Shands

August 2022 - August 2023

Valet driver

Gainesville, FL

- Provided customer service and hospitality to hospital patients and visitors in a fast-paced environment.
- Operated customer vehicles safely while following company procedures and safety requirements.
- Managed vehicle flow and parking space allocation to maximize capacity and operational efficiency.

Additional Skills

Spanish (Fluent) | Microsoft Excel | Microsoft Office