

Jason Sacerio

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EDUCATION

University of Central Florida

Bachelor of Science in Computer Science, Minor in Math

Orlando, FL

Spring 2027

EXPERIENCE

Researcher

Sept. 2024 - Present

KSRP@UCF

Sunrise, FL

- Conducted research on security and fault tolerance of **LLMs for embedded systems**, evaluating the impact of soft errors and adversarial attacks using real hardware and Gem5 simulation
- Analyzed mitigation strategies for LLM vulnerabilities, including memory bit-flip attacks and novel embedded-specific attack vectors, across platforms such as embedded boards and mobile devices (Android/iOS)

Software Engineer Intern

Apr. 2024 - Sept. 2024

Blackstone

Miami, FL

- Invited as **1 of 20** university students to participate in gaining valuable insight and mentorship from engineers at Blackstone
- Optimized **Python-based** back-end for the finance department, refactoring critical data pipelines and improving database queries, which reduced end-of-day report generation time by **30%** and increased the reliability of financial data processing.

Software Engineer Intern

Jan. 2023 – Aug. 2023

Capitol Steel Structures

Miami, FL

- Solely designed a comprehensive customer database using **MongoDB and Django**, streamlining data management and operational workflows to support increased client volume.
- Built the company's first e-commerce website using **Python, HTML/CSS, and Stripe** for payment processing, enabling online sales of steel products and generating **\$273,000** in revenue in the first year.

Divison Lead

Jan. 2023 - Dec. 2023

MDC Esports

Miami, FL

- Orchestrated all project phases, managing large-scale events with up to **30** attendees and ensuring flawless execution through strategic design and scheduling.
- Directed a **12-member** team in a previously unranked program, elevating it to national recognition, achieving **Top 200** in the United States and **Top 50** in the Southeast.

PROJECTS

ZPM-TUNA | C, Python, ROS2, Arduino, Flutter, Dart

Oct. 2025 - Present

- Won **1st place** in **Pheratech Systems ROS2 Challenge** during Knight Hacks VIII (2025)
- Developed **ROS2 based autonomous swarm drones** for evacuation scenarios, enabling coordinated navigation through simulated fire environments to locate optimal real-time exits
- Implemented inter-robot communication and adaptive pathfinding, allowing agents to share blocked routes and improve evacuation efficiency over time.
- Integrated a **computer vision based human detection model** using onboard camera data to identify and track occupants in low visibility emergency environments

Face2Learn | Python, TensorFlow, Javascript, pyTorch, Gemini API, Flask

Mar 2024

- Built Face2Learn Chrome extension in under 36 hours (team of 3), integrating **TensorFlow** emotion recognition (**65% accuracy**), **Haar cascade detection**, and Canvas API overlays for real-time mood analysis on YouTube.
- Engineered a full-stack workflow combining a **Flask backend (Python, TensorFlow, Gemini API) with a TailwindCSS/JS** frontend, delivering a lightweight, accessible, and privacy-focused user experience.

TECHNICAL SKILLS

Languages: C, C++, Rust, Python, Java, Javascript, Typescript, SQL, HTML/CSS

Libraries/Frameworks: Django, Tailwind, MongoDB, Pandas, NumPy, Matplotlib, ROS2

Developer Tools: Git, Docker, Jupyter Notebook, Visual Studio, PyCharm, CLion, Eclipse, Kubernetes, IDA Pro