Adrian Lozada

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EXPERIENCE

Software Engineer Intern 05/2025 - 08/2025
Orion Defense Solutions L.L.C. (Remote)

- Streamlined company workflows by designing, building, and deploying a Python/FastAPI automation platform integrated with Orion's proprietary data sources; the system is actively used across the company, reducing project cycle time by ~1 week.
- Automated complex backend tasks and accelerated project delivery by another week; utilized Python, SQL, and LangChain workflows that connected multiple internal systems.

Undergraduate Researcher 01/2024 - 05/2025
Reality, Autonomy, Robot Experience (RARE) Lab, USF Tampa, FL

- Published two first-author papers at ACM/IEEE HRI 2025 (25% acceptance rate) on autonomous fog-screen communication systems, contributing novel methods for robot-human interaction.
- Developed ROS nodes in C++ to synchronize Fetch robot behavior with Arduino microcontrollers, achieving reliable distributed actuation in high-stakes scenarios.

PUBLICATIONS

- A. Lozada, V. Keth, U. Tijani, M. Klein, Z. Han. "A Controller for Robots to Autonomously Control Fog Machine." *Proceedings of the 2025 ACM/IEEE International Conference on Human–Robot Interaction (HRI)*, 8th International Workshop on Variable Autonomy and Mixed-Initiative in Human–Robot Interaction, 2025.
- A. Lozada, U. Tijani, V. Keth, H. Wang, Z. Han. "Anywhere Projected AR for Robot Communication: A Mid-Air Fog Screen–Robot System." *Proceedings of the 2025 ACM/IEEE International Conference on Human–Robot Interaction (HRI)*, 2025. Acceptance rate: 25%.

EDUCATION

Georgia Institute of Technology, Atlanta, GA Graduation: 12/2026 (expected)
M.S. Computational Science and Engineering 4.0/4.0

- Relevant Coursework: Advanced Operating Systems, Database Systems, Parallel High Performance Computing

University of South Florida (USF), Tampa, FL 08/2021 - 05/2025
B.S. Computer Engineering, *summa cum laude* 3.9/4.0

- Honors: FLIT-GAP Scholar, Bright Futures Scholar
- Relevant Coursework: Analysis and Design of Algorithms, Data Structures, Social Networks, Computer Architecture

SKILLS

Languages: Python, C/C++, SQL, JavaScript
Systems/Areas: Data Structures & Algorithms, Distributed Systems, Unix/Linux
Tools: Git, Docker, Kubernetes, FastAPI, Flask, ROS
Libraries: PyTorch, NumPy, Pandas, SQLAlchemy, LangChain, LangFuse

PROJECTS

Graph Neural Network-Based Fraud Detection 01/2024 - 05/2024

- Developed a Graph Neural Network in PyTorch to classify fraudulent financial transactions, achieving 91% accuracy on real-world datasets.
- Preprocessed graph data with NetworkX, extracting structural features (centrality, clustering coefficients) to improve model performance.

Development of Autonomous Vehicle 05/2024 - 08/2024

- Led a team of seven students to design and build an autonomous vehicle using a Raspberry Pi platform; mentored peers in Raspbian/Linux development and facilitated code reviews, enabling the team to deliver a working prototype.
- Designed and deployed a Flask backend with SQLAlchemy to expose REST endpoints for robot status, logs, and commands

AWARDS

UR2PhD Technical Conference Travel Award, Computing Research Association (CRA) ($2000) 03/2025
Tampa Conference Presentation Grant Program (CPGP) ($700) 03/2025
NSF Distributed Research Experiences for Undergraduates (DREU) ($7000) 05/2025 - 08/2025
FLIT-GAP Scholarship 11/2023 - 05/2025
Florida Bright Futures Scholarship (%100 of Tuition) 08/2021 - 05/2025