

# LUCAS LE

lle107@syr.edu • (206) 581 6984 • linkedin.com/in/le-lucas

## OBJECTIVE:

Sophomore Computer Engineering student with hands-on experience in embedded systems, IoT devices, and machine learning. Adept at FPGA development, secure communication protocols, and collaborative research in academic lab environments.

## EDUCATION:

**Syracuse University**, College of Engineering and Computer Science

**Anticipated May 2028**

B.S. in Computer Engineering

GPA: 4.0 / 4.0

Relevant Coursework: Data Structures, Digital Logic Design, Object-Oriented Design, Fundamentals of Linear Systems

## SKILLS:

Languages: Java, VHDL, C, Python

Hardware: Microprocessors, Data-efficient Embedded Systems

Applications: ExpressSCH, Quartus, Arduino IDE

## PROJECTS:

### Custom FPGA Computer

**April 2025 - May 2025**

- Constructed an 8-bit computer using VHDL on an FPGA, including a custom CPU, ROM, and 64-bit register to simulate basic computing architecture
- Designed and tested sequential and combinational logic with edge-triggered components and nested architecture using VHDL port mapping to demonstrate functional digital system behavior

### Radio-Based Mesh GPS Device for Predictive Tracking

**June 2024 - August 2024**

- Developed a GPS and accelerometer enabled IoT device to transmit real-time location data across a P2P mesh network, with LED visual indicators for user-friendly location tracking
- Designed encrypted P2P radio communication, passing an initial encryption key to enable verifiable data transfer
- Optimized firmware to under 400 lines of code and <30KB memory usage while preserving full device functionality, improving performance and deployment efficiency

### Mini-Motion Detector

**February 2024 - March 2024**

- Devised algorithms to classify movement states (active, paused, idle) using real-time distance and timing sensor data
- Miniaturized hardware to 1.8" x 1.4" x 2.0" footprint while integrating dual sensors and multi-device communication, facilitating portable use in constrained environments

## EXTRA CURRICULAR ACTIVITIES:

### NEXIS Research Lab, Vice-Director, Syracuse, NY

**April 2025 - Present**

- Assisting the Director in overseeing Executive Board operations, including budget planning, event coordinating, and strategic goal-setting, to ensure efficient organizational performance
- Maintaining compliance with Syracuse University RSO policies and obtaining annual funding through documentation, reporting, and strategic planning
- Coordinating with 5+ project team leads, leveraging communication, organization, and problem-solving skills to track progress across initiatives involving 200+ student researchers
- Preparing to transition into the Director role for 2026–2027 academic year

### NEXIS Research Lab, AI Researcher, Syracuse, NY

**January 2025 - April 2025**

- Led task assignment, meeting documentation, and timeline management for a project focused on detecting misinformation in finance, utilizing machine learning and natural language processing
- Extracted and preprocessed Kaggle and Hugging Face datasets to enhance data quality and machine learning model performance, enhancing training accuracy by ~15% after processing
- Implemented a text-analysis model that identifies key words and patterns to quantify informational accuracy, then built a simple GUI to test live predictions

### Lakeside Robotics Club, Co-Leader, Seattle, WA

**September 2021 - July 2024**

- Co-led club operations, overseeing event planning, funding management, and hands-on engineering sessions
- Established a team communication server, advocated for and obtained a permanent robotics workspace, and helped launch a second competitive team
- Organized administrative meetings, advocated for increased funding, and ensured policy compliance, resulting in over \$16,000 in new long-term financial support for the club
- Earned the VEX Judges Award in 2022 and 2024, selected from 15+ teams for leadership, collaboration, and innovation

## WORK EXPERIENCE:

### Summer IT Support Intern

Seattle, WA

**June 2020 - August 2023**

- Provisioned and managed over 400 faculty and student computers leveraging automated Azure pipelines and manual setup processes, improving system deployment efficiency across two campuses
- Delivered on-site technical support across two campuses, resolving hardware and software issues to minimize downtime and assist with day-to-day IT operations
- Set up and serviced A/V infrastructure, including classroom projectors, WiFi Access Points, and wired connections, supporting reliable tech functionality in 20+ classrooms