Lakshmi Katravulapalli

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Education

University of Central Florida, Orlando, FL — **GPA:** 3.833/4.0
Master of Science in Computer Engineering — **Graduation Date:** December 2026
Bachelor of Science in Computer Engineering — **Graduation Date:** May 2025

Technical Skills

- **Programming Languages:** C, C++, Java, Python, Verilog, Assembly Language, JavaScript, HTML
- **Software & Tools:** NI Multisim, LTspice, Xilinx Vivado, Eagle PCB, Arduino, Code Composer Studio, VS Code, GitHub, Embedded Programming, Full-Stack Development, Linux, Certified Microsoft Office
- **Hardware:** Soldering, Breadboarding, PCB/Circuit Design, PCB Fabrication, Electrical Lab Equipment, TI MSP430FR6989, ESP32

Projects

Smart Safe Senior Design Project **August 2024 - April 2025**

- Collaborated in a multidisciplinary team of four to design and implement a "Smart Safe" with advanced security features and real-time email notifications.
- Programmed and tested components in C/C++ for the ESP32 microcontroller, utilizing debugging techniques and layered testing to ensure reliable functionality.
- Contributed to a comprehensive 120-page report detailing the design, implementation, and testing plan, while enhancing teamwork and communication skills throughout the project.

Tourist Event Recommendation App **October 2024 – December 2024**

- Collaboratively developed and deployed a MERN stack web application for a group project.
- Utilized MongoDB to organize and query data with collections and clusters.
- Contributed to front-end development with React and TypeScript, creating an interactive and user-friendly interface.

Junior Design Eagle Range Finder **May 2024 – August 2024**

- Engineered a range finder project as part of a Junior Design course, focusing on PCB design and fabrication using Eagle PCB Design Software.
- Programmed and tested software for the MSP430 microcontroller to operate the range finder.
- Demonstrated proficiency in PCB design, fabrication, soldering, and microcontroller programming.

Big Data and Malware Detection Project **February 2024 – May 2024**

- Conducted a comprehensive literature review on malware detection in Big Data with a team of 3.
- Researched and organized various malware detection methods, including deep learning, data mining, and AI-based algorithms.
- Evaluated the effectiveness of different malware detection models in handling large datasets.

Leadership Experience

Hardware Project Co-Lead, Women in Electrical and Computer Science (WEECS) **January 2025 – Present**

- Co-led the planning and execution of hands-on hardware projects, assigning tasks and organizing project timelines to ensure successful completion.
- Demonstrated technical leadership by guiding members in circuit assembly, Arduino programming, and troubleshooting for projects like a sound sensor and LED matrix display.

Corresponding Secretary, Tau Beta Phi Engineering Honors Society **May 2023 - May 2024**

- Organized and maintained the club's database, handled forms and student information and submitted eligibility reports.
- Assisted in preparation for initiation including reviewing eligibility and interviewing potential candidates.

Student Assistant, CECS Academic Affairs Office **June 2023 - October 2023**

- Assisted with front-desk operations, including answering student questions, facilitating course registration, and responding to telephones and emails regarding student concerns.
- Advised an average of 25 students daily with academic affairs.