Xzavier McKenzie

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Electrical Engineer with two years of experience in embedded systems and controls. Passionate about integrating mechanical, electrical, and software systems to create innovative solutions in robotics and automation.

WORK EXPERIENCE

Jabil Inc. — Clearwater, Fl
Scholars Program — August 2024 – June 2025

- Authored comprehensive documentation of the research process, including design requirements, system schematics, testing procedures, and results analysis. Formally presented to corporate stakeholders
- Collaborated with a team of engineers to ideate, design, and to develop a new innovative technology for volumetric measurement. Researching, analyzing and testing new technologies to accomplish this task.
- Designed and built a prototype system using LiDAR sensors to non-invasively measure the volume of liquid inside non-conductive, flexible containers.

Mini Circuits DFX Lab — Tampa, Fl
Lead Lab Assistant — September 2022 – Current

- Organize instructional sessions on the operation of advanced machinery including 3D printers, laser cutters, and milling machines to enhance students' proficiency in utilizing these technologies.
- Maintain organization's website, ensuring a user-friendly interface and timely dissemination of information.
- Demonstrated strong leadership by overseeing lab activities, coordinating with faculty, and providing technical support to fellow students.

PROJECTS

Non-Invasive Volume Measurement in Flexible Containers | ROS2 | Python

- Designed a system able to calculate the volume of an unknown liquid, with unrestrained dimensions, using non-invasive techniques for medical practices with **7.5% accuracy** of actual volume utilizing LiDAR
- Communicated via ROS2 protocol for real-time spatial data acquisition, applying hierarchical clustering
- Researched and optimized known algorithms to improve volume calculation of module

Machinery FOM System | 3D Design | Electrical Design | Programming

- Developed user authentication system to streamline traffic flow in lab reducing machining errors by **30%**
- Designed enclosures to safely contain electronics allowing for simple troubleshooting and maintenance.
- Demonstrated teamwork through interdisciplinary development of online user authentication software.

Poker ML | Python

- Designed an artificial intelligence (AI) to develop a long-term poker strategy utilizing regressive logistic machine learning techniques, resulting in **150% increase** in profitability over a 2-week period.
- Developed an interactive program that runs a closed-loop version of NL Texas Holdem with 2-9 players.

EDUCATION

University of South Florida | Tampa, Fl — Expected Graduation December 2025
Bachelor of Science in Electrical Engineering

SKILLS

Languages: Python, C/C#, HTML/ CSS/JavaScript, MATLAB/ Simulink, PSpice
Software: SOLIDWORKS, Wireshark, Blender, Arduino, AutoCAD, Revit, KiCAD, Microsoft Office Suite 365
Fabrication Processes: FDM/ SLA Printing, Soldering, PCB Design, Woodworking, Electronic Lab Equipment