LUKE BARBER

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Recent graduate from the University of South Florida, Bachelor of Science Electrical Engineering, minor in pure Mathematics. Throughout my time in academia, I have been responsible for finding innovative and cost-effective means to accomplish both school projects and personal projects. Beyond my degrees I possess unique experience with both hardware design and production level testing. A branch of my independent research led to experience with hardware/software integration. My senior project involved electronic systems integrated with machine learning for security sensing, wherein I gained experience communicating and working with a team in a simulated professional engineering setting. I believe that my education and experiences will allow me to contribute value to your organization.

Education
Bachelor of Science in Electrical Engineering, University of South Florida   May 2023
- Cum Laude USF Overall GPA: 3.61

Skills
Equipment: Oscilloscope, Spectrum Analyzer, Vector Network Analyzer
Computer Languages: C, C+, MATLAB, Python; Experience with SQL, HTML/CSS, Verilog
Skills: Mechatronics, Bioelectronics, RF, Controls Engineering, System Analysis, Machine Learning
Hardware Programming Languages: LabView, RSLogix, Automation Studio, Assembly Code
Foreign Languages: Proficient in French; Experience with Hebrew
Electrical Work: Automobile Electrical Systems, DC motors
CAD: Fusion 360, OrCAD Pspice, Proteus Simulator; Experience with Eagle PCB and Fritzing
Microsoft Office: Word, Excel, PowerPoint, Access, and Outlook, 360 Office and Teams

Projects
Raspberry Pi/Machine Learning ECG   2021
- Using a Raspberry Pi in conjunction with Machine Learning to detect abnormalities and classify an ECG

Senior Project: Video Analytics at the Edge   2022-2023
- Utilizing an edge device, open-source software, and machine learning, developed an autonomous security camera that recognized anomalous objects/behavior and automatically record and track object/individuals.
- Performed risk analysis and cost improvement analysis.
- For the duration of the project, submitted progress reports and underwent regulatory reviews

Experience
Engineering Intern, Global ETS   Summer 2022
- Established operating data and conducted experimental tests on new and obsolete electric components, such as Op Amps, Voltage Regulators, etc.
- Saved the company an estimated $5,000 (annually) by successfully prototyping an order tracking system

USF IEEE Hardware and Robotics Chair   2022-2023
- Taught an Arduino 101 Course to fifty students, assisted in building robotics projects
- Built and displayed three robots for USF Engineering Expo
- Collaborated with Google Student Development Club to teach a home automation class

Treasurer, Wireless and Microwave Instrumentation (WAMI) Forum   2023
- Managed the budget and finances of the Annual USF (Wireless and Microwave Instrumentation) Forum

Strategic Appraisals and Analytics   Summer 2021
- Aided in the appraisal of regulated utilities, by trending historical plant cost, growth rates, and capitalization of income stream using band of investment method.

United States Citizen by birth
English primary language
Comp TIA Security+ in progress