Kellen Lively

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EDUCATION

Vanderbilt University School of Engineering — Graduation: May 2022
Bachelor of Electrical Engineering

Trevecca Nazarene University Dept. of Science and Mathematics — Graduation: December 202**1**
Bachelor of Physics and Pre-Engineering

Professional Experience

General Motors — May 2020 - August 2020
Electrical Engineering Controls Intern
- Programmed robots with PLC logic
- Designed and programmed HMI screens.
- Took on various projects including removing a safety hazard.
- Optimized data acquisition of MTTR and MCBF.
- Solved arduous tasks each day involving the robots.

IDEX, Fire and Safety Sector — May 2021 - August 2021
Electrical Engineering Intern
- Over-sought various reliability tests on unreleased products and their prototypes.
- Conducted research to discover ways to digitalize the traditional first responder products.
- Managed the setup of the unveiling of a new product at the FDIC
- Programmed a PCB in C# to be an error simulator for a product in development.
- Collaborated with teammates to develop new features that would simplify first responder on-scene tasks.

The Vanderbilt Robotics Team , Vanderbilt University — August 2020 - May 2021
Electrical Team Lead
- The robotics team competes in the Lunar competition at NASA.
- Managed a group of engineering students that worked towards building a complex electrical system.
- Collaborated with the programming and mechanical leads to implement the systems.
- Focused on the powering of the robot's components and the communication of the components using CAN.

Relevant Projects

Robot safety project, General Motors — May 2020 - August 2020
Programming Multiple Robots
- Urgently created a safety system after two injuries occurred in the same location.
- Designed a process that would move the job to a different location when faulted.
- Programmed eight robots in PLC, and the creation of a new HMI.
- Created two custom HMI screens to make the process intuitive for future engineers.
- It has been tested and approved, and is currently being used today.

Error-message simulator, IDEX — May 2021 - August 2021
Simulates errors using CAN messaging
- Effectively designed a system for a new product to simulate in-the-field errors.
- Implemented my understanding of the J-1939 protocol for CAN messaging to simulate real-world errors.
- Programmed the simulator in embedded C
- Successfully joined the software and hardware together.

Monitoring System, Hayward — August 2018 - May 2019
Remote Monitoring System for Heating Pumps
- Invented a complex system that allows their engineers to monitor the success of their pumps remotely.
- Monitors RMS power of each on cycle, in and out temperatures at various spots, and water flow.
- Implemented a server that logs the data. Locations stored in longitude and latitude.

Engineering Design Competition, Trevecca University — August 2017 - May 2018
Remote-Controlled, Object-Grabbing, Fighting Robot
- Modeled and strategically assembled in SolidWorks.
- Strategically coded in C to maximize efficiency of components.
- Designed the PCB in Cadence to have wireless capabilities using RF.

Skills

Programming
- C, Embedded C, C++, Python, Java, Javascript, Assembly, PLC, MATLAB, Microsoft Suite, SolidWorks, LabView

Hardware

- Advanced PCB design and analysis, Familiar with most architectures
- Altium, OrCad, KiCad, Eagle, Cadence
- Understanding of analog and digital systems

Social

- Eight years of experience managing people, Work Breakdown Structure, Gantt Chart planning, Online-Collaboration platforms, Out-of-the-Box Creativity, Adaptability, Accountability