Angela **Hudak**

Computer Engineer

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EDUCATION

Rochester Institute of Technology | B.S. in Computer Engineering — August 2018 - May 2023

EXPERIENCE

Poseidon Systems | Product Development Engineer — Jan 2023 - May 2023

- Working on advancing the development and redesign of the AP2200 Industrial Data Logger.
- Done extensive research into new features and fixes for an optimal product design.
- Designing the Printed Circuit Board in EAGLE, and testing in LTSPICE.

Amazon Web Services (AWS) | Technical Writer — May 2022 - August 2022

- Converted the FreeRTOS.org Wordpress site to GitHub Flavored Markdown for GitHub Pages.
- Created a Python script utilizing the Pypandoc API to convert between file types.
- Wrote extensive documentation in HTML so the conversion process can be repeated with an easy user experience.

Bryx Inc. | Full-Stack Embedded Systems Engineer — September 2021 - May 2022

- Designed in KiCAD, developed, and tested prototype Printed Circuit Boards.
- Validated circuit design and component compatibility using LTSPICE.
- Completed through hole (THT) soldering for board building and re-work.
- Utilized breadboards for prototypes, concept validation, and electrical debugging.
- Various projects using mechanical CAD and using / maintaining 3D printers.
- Wrote Arduino and Python code to interface and test hardware.
- Communicated with third party companies for hardware product development.

Abbott | Project Support Engineer — July 2020 - December 2020

- Designed and developed the backend for a site that would allow the user to store and analyze data using Python and the Pandas library.
- The application was able to receive and organize data from a csv file so it could be easily viewed by the user.

PROJECTS

Gamification and Performance Monitoring of Sensorimotor Training — August 2022 - Present

- A Multidisciplinary Senior Design project for NASA, in order to train and monitor Astronauts on their sense of balance.
- Performed extensive electrical documentation and validation for Tolomatic actuators, sensors, and kill switch circuits.
- Implemented an Arduino MEGA to read from four S-Type load cells inside of the move-able platform. Arduino C/C++ code calibrates, reads, and outputs data. A Python script reads the data and calculates a Balance score for the VR game and stores the raw coordinate calculations for MATLAB plotting / graphs.
- Designed and developed a Printed Circuit Board (PCB) in KiCAD for attachable accelerometers.
- Implemented python server for communication between sensors, attachable accelerometers, actuators, and kill switch to the Unity VR game.

SKILLS

- **Languages:** Python, C, Arduino C/C++, C++, LaTeX
- **Software:** KiCAD, EAGLE, PSPICE / LTSPICE, VSCode, Raspbian, Vim, RedHat, Ubuntu
- **Hardware:** Arduino, Raspberry pi, STM32L476xx, Breadboard / Circuitry, Oscilloscopes, Digital Multi-meter, Waveform Generator

EXTRACURRICULARS

Computer Science House | House Improvements Director, 3D Admin — August 2018 – January 2022

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- Computer Science House is a living and learning community with a helpful environment that emphasizes hands-on learning and projects outside of the classroom.
- The House Improvements director delegates projects that improve the physical aspects of floor, such as painting, cleaning, building, and organizing House's resources.
- A 3D Print Administrator assists and educates other members on how to print 3D files effectively and taking care of 3D printers.