Angela **Hudak**

Computer Engineer

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EDUCATION

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

EXPERIENCE

Amazon Web Services (AWS) | Quantum Computing Technical Writer — May 2022 - Present

- Authored and maintained AWS Braket Developer Guide and API Reference documentation using **XML** and **Git**
- Collaborated with Braket engineers to enhance technical documentation for seamless customer experiences
- Validated and tested Braket example code to ensure functionality and quality before deployment
- Developed a **Python** script leveraging the **Pypandoc API** to automate file format conversions

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

- Contributed to the redesign and development of the AP2200 Industrial Data Logger
- Conducted detailed research on feature improvements and design optimizations for enhanced product performance
- Designed **Printed Circuit Boards (PCBs)** using **EAGLE**, and validated circuit prototypes with **LTSPICE** simulations

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

- Designed, prototyped, and tested **PCBs** using **KiCAD** and validated designs with **LTSPICE**
- Performed **through-hole soldering (THT)** for board assembly and rework
- Used **breadboards** for hardware prototyping, concept validation, and debugging electrical systems
- Operated and maintained **3D printers** while creating mechanical **CAD** designs for various projects
- Developed **Arduino** and **Python** scripts to interface and test hardware components
- Collaborated with third-party vendors on hardware product development and component sourcing

Abbott | Software Engineer — July 2020 - December 2020

- Built a backend application to store and analyze data using **Python** and the **Pandas API** library
- Designed a system to process and organize data from CSV files for improved user accessibility

PROJECTS

NASA | Gamification and Monitoring of Sensorimotor Training — August 2022 - May 2023
https://github.com/MSD-RIT-NASA

- Developed a multidisciplinary solution for NASA to train and monitor astronauts' balance and sensorimotor capabilities
- Documented and validated electrical components, including Tolomatic actuators, sensors, and kill switch circuits
- Programmed an **Arduino** to interface with S-Type load cells, calibrate data, and communicate results for VR integration
- Created a **Python** script to process balance scores and log raw data for **MATLAB** analysis and plotting
- Designed and validated functionality of custom **PCBs** in **KiCAD** for attachable accelerometers
- Built a Python server to integrate sensors, actuators, kill switch, and connect to the Unity VR systems in **C++** for seamless operation

SKILLS

- **Programming languages:** Python, XML, C, Arduino C/C++, C++, LaTeX
- **Software tools:** KiCAD, EAGLE, PSPICE / LTSPICE, VSCode, Raspbian, Vim, RedHat, Ubuntu
- **Hardware proficiencies:** Arduino, Raspberry Pi, STM32L476xx, Breadboarding, Oscilloscopes, Digital Multimeter, Waveform Generator

CERTIFICATIONS

AWS Knowledge | Amazon Braket Badge — September 2024

- Demonstrated proficiency in quantum computing concepts, with a focus on Amazon Braket tools and workflows