

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 Py pandoc 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 with 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 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 MEGA 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 a custom PCB in KiCAD for attachable accelerometers and validated its functionality.
- Built a Python server to integrate sensors, actuators, kill switch, and Unity VR systems 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 proficiency:** 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.