Ashlyn Hanson

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Education

Truman State University, Kirksville, MO — **May 2023**
Bachelor's Degree in **Computer Science,** Minor in Design — **GPA: 3.9**

Work Experience

SDE Intern, Amazon AWS — **May - Aug 2020**

- Simplified and improved operations for the Braket Quantum Computing team by setting up a single place for the on-call to see and respond to customer issues, reducing the time to customer resolution from days to minutes.
- Implemented a Python program that automated a process of the team's operations using AWS serverless architecture including, AWS Lambda, S3 Buckets, DynamoDB, CloudWatch, and CloudFormation stacks.
- Created unit tests to ensure that the program functioned effectively, with a high success rate.

AFE Software Development Engineer Intern, Amazon AWS — **May - Aug 2020**

- Developed a Machine Learning algorithm using AWS SageMaker that predicts the execution duration of a quantum circuit.
- Implemented a program to retrieve and parse through data using AWS tools including AWS Lambda, DynamoDB, & S3
- Utilized the command line, git, and CI/CL pipelines.
- Applied unit and integration tests as well as a metric and alarm dashboard to ensure the durability of our function.

CS Teacher Assistant and Tutor, Truman State University — **2020 - Present**

- Graded student assignments and papers in a timely manner while ensuring that students understood the material covered in the CS courses.

Skills

- **Technical Languages:** Java, C++, Python, HTML/ CSS, JavaScript, C
- **Relevant Coursework**: Object-Oriented Programming, Data Structures and Algorithms
- **Familiar with**: Machine Learning, AWS Serverless Architecture, React, PySpark, Quantum Computing
- **Adobe Products:** Photoshop, Illustrator, InDesign, After Effects, Animate (Flash)

Projects

Predict Quantum Circuit Execution Duration (Java, Python)

- Designed a machine learning algorithm to predict the execution duration of a quantum circuit on a quantum processing unit, utilizing AWS serverless architecture, with 94-98% accuracy.
- Created an AWS Lambda function to parse through information from a quantum circuit to get information needed for a ML data set.

Automate Operations Process (Python)

- Implemented a program that automatically created a trouble ticket whenever a customer post was added to AWS Forums, GitHub Issues, or StackOverFlow
- Reduced the time for the on-call to respond to a customer issue from 3 days to 10 minutes

Organizations

- Association for Computing Machinery, **Truman State University** — **2019 - Present**
  - **Risk manager** on the executive board
  - **Team Leader** for the full-stack team on the web development team
    - Developed a website for the non-profit organization, Downtown Kirksville
- Tru Women in Computer Science, **Truman State University** — **2019 - Present**
- Co-leader of Programming Club**, Park Hill High School** — **2018 - 2019**