Andrew McMullin

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Github: github.com/mcmullinboy15
Portfolio: portfolio.mcmullin.app

EDUCATION:

UNIVERSITY OF MICHIGAN   *Aug 2021 - (December 2022)*

Masters in Computer Science and Engineering
- AI Foundations: Using Pytorch and keypoints to find simpler representation of 3D models.
- Parallel Computing: Implemented Robert's Cross Operator (Edge Detection) using CUDA
- Advanced Compilers: Extending Operator Fusion in TVM to include IndexedBackwardGraph

UTAH STATE UNIVERSITY   (GPA: 3.9 / 4.0)   *Aug 2019 - May 2021*

Bachelor's in Computer Science & Minor in Math
- ML in Clean Energy: Predicting Solar Power using 13,000 rows of SolarPower and WeatherData
- AWS Cloud Computing   ● Database Systems

SALT LAKE COMMUNITY COLLEGE   (GPA: 4.0 / 4.0)   *Aug 2018 - May 2019*

RELATED EXPERIENCE:

OPTIMA POWERWARE

Web-based Controls Engineer (Intern)   *July 2021 - Aug 2021*
- Developed controls for Goldmines to understand our controls and ML models. Currently in production.
- Fixed Django templates implementation and design.
- Recommended React.js for development scalability. Rebuilt current application to use Django API and React.js.

EZSALT (Startup)

Co-Founder and Lead Developer   *Nov 2019 - July 2021*
- Individually built EZsalt software from the ground up, with many versions and improvements.
- Updated Django application on AWS EC2, to a Vue.js project using FirebaseAuth, Firestore, and GCP Functions.
- Improvements made to scale to thousands of new customers and devices using MQTT protocol for communicating data from devices to users and databases.
- The current implementation is working in production, supporting over 100+ users, without failures.

OPTIMA POWERWARE

Data Controls Engineer (Intern)   *May 2020 - Aug 2020*
- Presented **Pytorch** models to predict the quality of the Goldmine's output(slurry).
- Resulting in a Neural Network of 3-5 Linear Layers, with 16 input features and 1 output feature.
- Preprocessed 20,000 data entries down to only accurate values from every 4 hours when sample was taken.
- Eliminated manual sampling every 4 hours for Goldmine Employees, using accurate quality prediction.

FREE LANCE

Web Developer   *June 2021 - present*
- Precision Systems Engineering(PSE)
  - Simplified PSE's financial API to display simplified company finances, and project budgets.
  - Currently displayed on company TV for employees, and potential clients to view.
  - Automated financial display to reduce the responsibility of employees
- Builders without Borders of Utah: New Webpage to learn about this non-profit (bwbutah.org)

SKILLS:

- Python: Pytorch, Numpy, Pandas
- JavaScript: Vue.js, React, Node, Vuetify, Material-UI
- C++: LLVM, TVM, MPI, Open, Cuda
- Java, Git, Linux, Django
- Software Development and Design
- Google Cloud:
  - Build, Functions, Run, VM, gcloud
- AWS Cloud Computing Graduate Course
- Supply Management, Logistics
- Tagalog Language

LEADERSHIP EXPERIENCE:

Eagle Scout   **Missionary**: Religious Mission in The Philippines. Held various leadership positions for over 100 missionaries. Ran audio/computer systems for meetings.