



# Andrew McMullin

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## EDUCATION

### MASTERS IN COMPUTER SCIENCE & ENGINEERING

University of Michigan

Dec 2022

- AI/ML and Parallel Computing, have advanced my understanding of python and computer systems.
- UI/UX Design focused on Prototyping and Developing UI designs that supported user needs (Figma, JS).

### BACHELOR'S IN COMPUTER SCIENCE & MINOR IN MATH

Utah State University

May 2021

- AWS Cloud Computing covered all AWS services to pass the AWS practitioners exam.
- Data Visualization centered on logical approaches to displaying data with charts and graphs (d3, jQuery).

## EXPERIENCE

### FULL-STACK ENGINEER

FREELANCE

June 2020

- Contributed to podcast automation software at startup Podflow, enhancing user experiences: [podflow.ai](https://podflow.ai)
- Built custom proposal workflow software, within Outlook Add-in.
- Automated GoalHome LLC's payroll with Python, factoring in overtime and unique day/night pay.
- Created nonprofit website for Builders without Borders, highlighting their mission and initiatives: [bwbutah.org](https://bwbutah.org)
- Developed a website, hosting instructional videos for textbook supplementation: [prclinks.com](https://prclinks.com)
- Designed a website, enabling farmers to calculate optimal seed quantities: [beta-supra-ag.web.app](https://beta-supra-ag.web.app)

### FULL-STACK ENGINEER (INTERN)

APPLE

May 2022 - Aug 2022

- Replaced 10 year old Hardware Tech. Compiled Memory website. In production in 3 months.
- Focused on maintainability for easiest possible future updates (Docker, CI/CD, Class arch., unit/e2e tests).
- Client-side logic (Vue.js) allowed for 10x response times, and 0 blocking notifications on errors.
- Django backend, with Redis queue to communicate with Apple Compute queue. Built with Docker.

### BACKEND ENGINEER (INTERN)

OPTIMA POWERWARE

July 2021 - Aug 2021

- Developed and strategically designed controls for Goldmines to use ML models. Currently in production.
- Fixed Django templates and design, rebuilt to use Django API and React.js (recommended for scalability).

### CO-FOUNDER AND CTO

EZSALT (Startup)

Nov 2019 - July 2021

- Built micro-controller with software for monitoring water-softener salt levels on your phone.
- Supports over 300+ users, without failures. Scaleable to thousands of new customers.
- Managed 3-4 new versions (Github), from Django on AWS EC2, to Vue/Flutter on Firebase.
- 4+ Cloud Functions for new users, messages, etc ([mcmullin.app/ezsalt](https://mcmullin.app/ezsalt)). 12+ other API endpoints.

### MACHINE LEARNING ENGINEER (INTERN)

OPTIMA POWERWARE

May 2020 - Aug 2020

- Predicted Goldmine output quality, using PyTorch NNs (3-5 Linear Layers, 16 input to 1 output feature).
- Preprocessed 20,000 data entries, and eliminated manual sampling every 4 hours.

## SKILLS

- **Python (Advanced):** Numpy/Pandas, PyTorch
- **JavaScript (Advanced):** React, Vue, Node, Express.
- **Tools:** Proficient in Docker, Skilled in Linux, Django, Flask, Redis, JAVA/C++, Cuda, MPI.
- **Cloud Services:** Proficient in Google Cloud, and multiple projects in AWS and Azure.
- **UI/UX Design:** Highly Skilled in HTML/CSS, Hyper focused on clean UX with maintainable/clean code.

## REFERENCES

**Derrick Leach**

CAD Manager at Apple  
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