Curtis L. Mitchell

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Career Summary

I am a full-stack and machine learning developer that is excited about making data-driven insights available to users at any technical level. I have worked in a variety of work environments and team settings from early-stage startups and open-source communities to international consultancies and government organizations. I am a diligent and patient team member that enjoys opportunities to both learn new skills and share my knowledge with colleagues.

Skills

Programming and Mark-Up Languages:
Python, JavaScript, HTML, CSS
TypeScript
SQL

Platforms:
Docker and Kubernetes
Node.js
MacOS and Linux
NGINX

Databases:
PostgreSQL
SQLite

Machine Learning Libraries:
Tensorflow and Keras
PyTorch
Scikit-Learn and Pandas

Python Libraries and Frameworks:
Numpy and Scipy
Matplotlib and Seaborn
NLTK and Spacy
Django

JavaScript Libraries and Frameworks:
React, Redux, Angular, and jQuery
D3.js and Highcharts

Professional Experience

NASA Ames Research Center (2021 - Present)
I'm working as a senior software engineer on a variety of aerospace projects within the Ames Simulation Laboratories team. My work includes full-stack projects using TypeScript, React, Node.js + Express, MobX, Docker and Kubernetes, GraphQL, and both SQL and NoSQL databases.

OpenMined (2021 - Present) (Open Source Contributor)
OpenMined is an open-source community committed to combining machine learning and privacy-preserving technologies to enable the advancement of scientific and social progress in data science while prioritizing data privacy and security.

I work as a volunteer software developer and tester on OpenMined's web applications and machine learning libraries.

Springboard Machine Learning Engineering Career Track (2020 - 2021) (Fellow)
Springboard's ML provides 400+ hours of hands-on course material, 1:1 industry expert mentorship, and completion of in-depth capstone projects. Through this program I mastered skills in the overall machine learning stack including data wrangling at scale, deep learning, and building and deploying large-scale AI systems.

My original capstone project was a Japanese-English translation application, using a dataset of Japanese-English sentence pairs to train an encoder-decoder neural network and using the resulting model to create a full-stack web application. (See https://curt-mitch/project/jp-en-translator). My second project was an application that predicts user-drawn Urdu digits, which involved training a convolutional neural network on thousands of Urdu digits before saving and deploying the model to a web application (See https://curt-mitch.com/project/urdu-number-classifier).

Mode Analytics (2017 - 2020)
Mode is online platform for helping analysts and data scientists perform analysis, build reports, and share their work more effectively. Some of my achievements at Mode included:

- Serving as the primary engineer on a full-stack feature used daily by customers to capture screenshots of Mode reports and took the feature from a success rate of <20% to >99%; this feature was a Node.js-based application running inside of a Docker container

- Successfully developing and leading a JavaScript workshop for members of the customer support engineering team to help them more effectively diagnose and solve customer issues and help users with writing custom JavaScript features in Mode reports

- Greatly expanding unit testing for Mode's TypeScript codebase and migrating 25% of our state-management system from Redux to RxJS in conjunction with other engineers

- Adding interactive tooltips and data summaries to the native charting system to better distinguish individual components in charts

- Regularly deploying and managing web application releases and acting as a first responder for possible production bugs and outages

Ayasdi (2015 - 2017)
Ayasdi offers software platforms for automated business value discovery and advanced AI-based insights across multiple industries. My work at Ayasdi included:

- Migrating Ayasdi's primary statistical UI from an older Backbone.js framework to one utilizing React and Redux, which greatly improved the performance of tables and visualizations by adding features such as infinite scrolling

- Regularly presenting and demonstrating new features at company all-hands meetings

- Writing Python-based Selenium scripts to test UI features and workflows

Bluenose Analytics (2013 - 2015)
Bluenose built a SaaS platform focused on helping companies grow and retain their customer base. My responsibilities included:

- Building new and redesigned UI components including a SQL query builder and custom date selector for retrieving data

- Interfacing directly with product managers, designers, and other engineers to spec out and test new features

DNV GL (2008-2010 and 2012-2013)
DNV GL is an international consulting firm offering services in numerous industries. I was part of their alternative energy and energy efficiency evaluation team. My responsibilities included:

- Performing statistical analysis on utility customers' energy usage

- Writing data mining SAS scripts to find relevant subpopulations of utility customers

- Building Excel dashboards modeling energy usage across multiple climate zones throughout the United States

Bridge Asia Japan (2011) (Volunteer)
I proofread and edited English-language annual reports and other material for the Tokyo office of a Japanese NGO.

Education

Springboard (ML Engineering Track) - 6-month course in artificial intelligence and machine learning technologies and methods

Hack Reactor - 3-month JavaScript-focused coding bootcamp for web development

Bachelors in Physics (BS) and Mathematics (BA) with minors in Japanese and German from the University of North Texas, graduated as an Honors Scholar through the Honor College