**Tyler Fitzwater**

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# Technical Skills

## Programming Languages

* Java, Python, C++, JavaScript, Rust, Ruby, Kotlin, C#, Bash, OCaml, C, LUA, R

## Platforms/Technologies

* AWS (EC2, CloudFormation, S3, Lambda, etc.), VirtualBox, Git, SQLite, MongoDB, Postman, Apache, Linux, Firebase, Android, Node.js, React.js, Arduino, .NET, WPF

# Experience

## Software Engineer Intern | Amazon Web Services (AWS) May 2022 – August 2022

* Automated a previously manual Mac VirtualBox image creation process for efficient service instance updates.
* Completed Bash and Python scripts to automate installation of Mac OS with our respective service dependencies on VirtualBox images for deployment on EC2 for our service (Device Farm).
* Ensured optimal performance and APPSEC compliance through extensive testing.
* Gained proficiency in Mac OS and virtualization technologies like VirtualBox and AWS services.
* Communicated effectively to deliver a minimum viable product before internship end.

# Projects

## SoftMax Regression and Neural Networks December 2022

* Implemented both SoftMax regression and fully connected neural network without any external ML libraries.
* Applied both models to predict classifications in the MNIST digit dataset.
* Plotted various graphs showing the cost accuracy as certain hyperparameters changed

## Movie Search Engine (React.js, Express.js) June 2021

* Streamlined a user-friendly movie search engine web application.
* Optimized API queries to Open Movie Database API for getting results around user’s query.
* Features pagination, filtering, and images of the movie posters alongside each result.

## Linux Shell Program (C) June 2021

* Developed a Linux shell program that can execute complex commands.
* Supports operators such as AND, OR, Pipe, Subshell, and more.
* Directly interacts with the operating system to fork processes efficiently.

## Beat Saber Graph Overlay (HTML, CSS, JS) January 2020

* Created a web-based overlay for streaming programs to be ran alongside the game Beat Saber.
* Graphs score percent possible, in real-time, as player progresses through each play.

## Wikipedia Search Discord Bot (Python, discord.py) August 2019

* Developed a service that allows a user to search any article on Wikipedia via Discord chat.
* Designed using custom discord embeds for displaying article information.

# Education

## B.S. Computer Science | University of Maryland August 2020 – May 2023

* Major: Computer Science
* Minor: Japanese