Alexander Ma

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Skills

- React, Django, Node.js, TypeScript, C++, C#, Flask, Java
- AWS S3, AWS Lambda, Azure, Firebase
- Docker, Kubernetes, Jenkins
- Sqlite3, MS SQL
- Jest, Selenium, Robot

Employment

Software Developer   **September 2021 - December 2021**

The Weather Network (Pelmorex Corporation)

- Developed a client-facing **TypeScript** and **Node.js** API that generates weather data given city and **Sqlite3** data in under **90ms** per call. Will be used by **thousands of users globally**
- Created a **React** and **Django** web application that loads a **Sqlite3** database allowing for better data creation, manipulation, and querying for internal teams over previous Microsoft Excel solution
- Developed an **AWS Lambda** function that automates weather data generation and stores results in **AWS S3** daily, saving time generating this data for internal teams
- Utilized **AWS S3** to store **Sqlite3** databases for different environments
- Automated deployment of the web application using **Docker, Kubernetes, and Jenkins**
- Used **Jest** to unit test the API with a code coverage of over **99%**

Software Developer   **January 2021 - April 2021**

BTNX Inc.

- Developed a new **Xamarin 5 .NET** mobile application in **C#** that predicts and records Drug and COVID test results from Rapid Test images for **10+ clients**
- Implemented **Express.js** endpoints that save Rapid Test data to **MS SQL** tables and creates custom result PDFs for clients
- Significantly improved existing image template matching algorithm in **Python** by using **OpenCV**, increasing successful transformation rate to over **99%**

Software Developer in Test   **May 2020 - August 2020**

Telus

- Fixed and wrote over **250** UI tests in **Robot** reducing overall test failure rate by over **20%**
- Utilized **Selenium** to create a **CSS** attributes matching strategy for page locators, enabling quicker and cleaner searches for attributes with dynamic elements
- Implemented new ways to query for strings on web pages using **Selenium**, with strategies such as substring, equality, and RegExp matching

Projects

Slate   **September 2019 - January 2020**

- Created a **React** and **Flask** social media web application with the ability to create schedules and see your friends' availability for the current day
- Implemented **React** frontend to display a schedule and feed from database information
- Integrated **Flask** REST API to resolve **HTTP** requests in order to retrieve and update schedule, account, and feed information
- Utilized **Firebase Realtime database** to store all neccessary information needed for the web application

Education

Candidate for Software Engineering   **September 2019 - Present**

University of Waterloo, Waterloo, ON