Alan Ma

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🌐 https://alan-ma.ca

○ https://github.com/alan-ma

Skills

Languages
JavaScript; Python; C; C#

Tools
Angular; Firebase; Git; Jira; AWS; Unity; Node.js; Vue.js; scikit-learn; Arduino; Hyper-V; TypeScript; Sass; MATLAB

Education

University of Waterloo   *2018–2023*
Software Engineering

- Cumulative Average: 90.3%
- Received President's Scholarship of Distinction for admissions average over 95%

Experience

SOTI Inc. – *Development Operations Intern*   *Summer, 2018*

- Identified potential improvements to cross-platform compatibility
  - Tested the feasibility of upgrading build machines from PowerShell 5 to PowerShell Core
  - Configured virtual machines in **Hyper-V** as local agents, running production pipelines for continuous delivery
- Built a new process to code sign Windows Mobile applications as an alternative to a $30,000 third-party API deal

SOTI Inc. – *Research and Development Intern*   *Summer, 2017*

- Built new UI components to allow clients to customize device details
  - Developed components for an Angular web application using **TypeScript**, **HTML**, **CSS**, and **Sass**
  - Fixed UI issues affecting cross-browser compatibility, working closely with QA
- Facilitated consistency across products by creating a style and design guideline

Prolexion *(Grammar checking software startup)* – *Product Development Intern*   *Summer, 2016*

- Presented a competitive analysis on technical functionality and user experience to the founders
- Increased team efficiency by creating a web application to automate the analysis of tests

Projects

DECA Online Member Hub

A web application built for business club members to practice multiple choice exams

- Parsed exams using **Python** scripts to automate adding exams, with over 90,000 questions in the database
- Implemented user login with emails via **Firebase**, allowing for progress tracking
- Provided access for over 150 active users by hosting the website on a web server (**Nginx** on **Ubuntu** – **AWS**)

Dash no Jutsu

A running simulator where players move their virtual characters by running on the spot in real life – like a ninja

- Interfaced data from accelerometers using **Arduino** and the I2C protocol for serial communication
- Translated running speeds from the real world to virtual characters in **Unity** using **C#**
- Integrated code with other developers, implementing a speed controller for character models

Reddit News and Stocks

A project created for a data class - an attempt to correlate trends in news posts on Reddit and stock market indices

- Parsed over three years of historical data using **Python**, archiving data locally
- Preprocessed and analyzed data using a linear regression model with the **scikit-learn** library
- Created visualization tools using **Vue.js**, dynamically retrieving archived files