Alan Ma

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github.com/alan-ma

Skills

Proficient: Python, JavaScript, C, Angular, Vue.js

Familiar: Java, C++, C#, Arduino, TypeScript, Node.js

Tools: Firebase, Git, Jira, AWS, Unity, scikit-learn, MATLAB

Awards

Hack the North: HERE.com API Award	*2018*
UWaterloo: President's Scholarship of Distinction	*2018*
Hack the North: PagerDuty API Award	*2017*

Experience

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

- Wrote **PowerShell** scripts to sign security certificates on executables as an alternative to a $30,000 third-party API
- Configured virtual machines in Hyper-V as local agents, running production pipelines for continuous delivery
- Tested the viability of upgrading build machines from PowerShell 5 to PowerShell Core

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

- Built UI components to allow clients to customize device details in an **Angular** web application using **TypeScript**
- Reduced bugs in the backlog by fixing UI issues affecting cross-browser compatibility using **HTML**, **CSS**, and **Sass**
- Facilitated consistency across products by creating style and design guidelines

Product Development Intern – Prolexion   *Summer, 2016*

- Increased team efficiency by creating a web application using **JavaScript** to automate test case analysis
- Conducted market research comparing the flagship product to competitors, presenting results to the founders

Projects

DECA Online Member Hub – *Web application for club members to practice multiple choice questions*

- Parsed exams using **Python** scripts, adding over 90,000 practice exam questions to a **NoSQL** 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 – *Players run on the spot to race their virtual character simulations*

- 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#**
- Collaborated with codeveloper to redesign interfaces of system components to implement a speed controller

Reddit News and Stocks – *Trend correlation analysis of news posts on Reddit and stock indices*

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

IEP Comment Processing – *Tool created for school administration to generate customized student reports*

- Saved over 100 working hours for administration by automating conversion processes using **Python**
- Built a secure and robust application with modifiable templates to allow for future customization

Education

University of Waterloo – **Software Engineering, BSE**   *2018–2023*

- Cumulative Average: 90.3%