Joshua **Lee**

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Skills

Languages: Java, JavaScript/TypeScript, HTML, CSS, C#, C++, Python, ARM Assembly
Tools & Frameworks: Android SDK, Node.js, Angular2, Express, MongoDB, Travis CI, SQL, Firebase, Git

Experience

D2L   Toronto, ON
Software Engineering Intern   Jan – Apr. 2017
- Restructured **Mongoose** schemas resulting in an **85% reduction** of memory usage consumed by the server
- Wrote a token based authentication service following **OAuth 2.0** protocol on both web and mobile platforms
- Designed a **polling service** which monitored the response of several Brightspace APIs for changes in state, pushing all necessary data to the appropriate services
- Allowed for a wide range of user input by training the natural language processing engine provided by Wit.ai
- Setup continuous deployment pipeline with automated unit testing using **Travis CI**, Bash, and Mocha
- Developed a cross-platform mobile application using the Ionic framework alongside the use of Cordova plugins, leveraging the device's native capabilities

TD Innovation Lab   Waterloo, ON
Solutions Developer   May – Aug. 2017
- Followed **Google Design Sprint** principles to develop applications through ideation, wireframes, and prototypes while maintaining user centric design
- Wrote a **singleton cache** which was utilized to store persistent data, increasing the speed of saving and loading data by over **55%** as well as reducing the amount of on-device storage used by **100%**
- Developed application for the **Microsoft HoloLens** using Unity3D, HoloToolKit and Blender3D
- Utilized the HoloLens's **spatial mapping** capability to generate a **realtime mesh** of the surrounding environment

Projects

Blabble (https://github.com/joshlee96/blabble)
- Developed virtual blackboard which enables users to anonymously post and share their thoughts
- Designed API to be RESTful and modular using **Node.js** and Express and ensured atomicity in all **MongoDB** operations

UWaterloo Reddit Bot (https://github.com/joshlee96/redditbot)
- Wrote a reddit bot in **Python** that automatically responds to comments in the UWaterloo subreddit upon the detection of certain phrases

Task Plus (https://github.com/joshlee96/taskplus)
- Built an Android task managing application designed to help people stay organized via the use of "task groups"
- Stored persistent data using the **Realm** database, utilizing its ability to query and store data efficiently

Education

University of Waterloo   Waterloo, ON
Bachelors of Applied Science – Computer Engineering | Expected June 2020   2014 – Present