

Ryan Liu

Contact

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Programming Languages

C
C++
Java
Python
Javascript

Software Libraries

Boost
OpenCV
Protobuf
MongoDB
GoogleTest
GoogleMock

Development Technologies

Git
SVN
Postman
Keil µVision
Linux Systems

Languages

English
Mandarin

Education

09.2014– **Bachelors of Applied Science** The University of British Columbia, Canada
12.2019 *Major in Computer Engineering, Minor in Mathematics* GPA: 3.7

Work Experience

09.2017– **Motion Metrics International** Vancouver, BC
12.2017 *Software Developer Intern*
• Improved system stability by eliminating uncaught bugs through the implementation of system and unit tests using GoogleTest and GoogleMock
• Revised data collection algorithm by reducing density of clusters and increasing total number of collected points to increase accuracy of results
• Sped up overall system performance by more than 10% by removing layers of abstraction and refactoring legacy code to leverage standard C++11/14 libraries
01.2017– **SMART Technologies** Calgary, AB
09.2017 *Firmware Engineer Intern*
• Designed an innovative serial-based control system in C++ to manage SMART's latest SMART Boards through the implementation of test-driven development
• Validated system functionality of latest SMART Boards through an automated test environment implemented in C++ using above control system
• Researched, designed, and tested prototypes of next generation SMART Boards

Technical Projects

04.2018– **TVM-Calculator - Javascript based Accounting Calculator** github.com/ryanliu6/tvm-calculator
Present *Personal Project - Project was on hiatus from June to October*
• Developed a RESTful API for calculating accounting ratios and value of money
• An Electron-React based GUI application is currently in development
02.2018– **Cleanify - Atom Package** github.com/ryanliu6/Cleanify
04.2018 *Personal Project*
• Built an Atom package to refine code based on user-specified keywords using JS
• Integrated ability to modify keywords or to remove lines completely on the fly
09.2016– **CheckedOut - Shopping Application** github.com/BenjaminLang/cpen_321
12.2016 *CPEN321 - Software Engineering*
• Developed a custom API in Python to interface with MongoDB NoSQL databases for efficient cataloguing of stores in the Greater Vancouver Area
• Implemented a custom caching algorithm in Python to provide users with quick and optimized search results based on their search history

Interests

Professional: Firmware Development, Operating Systems, RESTful API, and Machine Learning

Personal: Reading, Editing, Writing (aspiring author), Fitness, Cooking, and Gunpla