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

Work Experience

09.2017– 12.2017 — Motion Metrics International — Vancouver, BC
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– 09.2017 — SMART Technologies — Calgary, AB
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
- Prototyped next generation RFID based education SMART Boards by constructing custom RFID chips and readers in hardware and firmware

Technical Projects

04.2018– Present — TVM-Calculator - Javascript based Accounting Calculator — github.com/ryanliu6/tvm-calculator
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– 04.2018 — Cleanify - Atom Package — github.com/ryanliu6/Cleanify
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– 12.2016 — CheckedOut – Shopping Application — github.com/BenjaminLang/cpen_321
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