RYAN WONG

Software Engineering
University of Waterloo

CONTACT

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LANGUAGES

Java, C++, C, Javascript
Familiar with **Python, Ruby, C#, Perl, SQL**

TOOLS

Frameworks: **Rails, Spring**
Version Control: **Git, SVN**
Testing: **TestNG, Appium**
OS: **Windows, Linux, Mac**
Databases: **MySQL, SQLite**

EDUCATION

University of Waterloo
Candidate for Bachelor of Software Engineering, 2015-2020
SAT – 2390 Cumulative

AWARDS

Dean's Honour List and First Decile ranking for all study terms

2nd place at ECOO 2015 Central Region Programming Contest

Honour Roll for American Mathematics Competition (AMC) 2014, and qualification for AIME

EXPERIENCE

Software Developer Intern — May 2016-Aug. 2016

Sony Creative Software, Waterloo, ON

- Implemented in-app filesystem search in C++, supporting media metadata queries
- Minimized search time by utilizing hash tables and suffix trees to build inverted and substring indices; reduced time from $O(mnp)$ to $O(m + z)$, where $z \ll np$ in practice
- Developed date-picker GUI using Javascript for time range searching
- Designed and integrated crop dialog module with the video encode engine

Mobile Developer (Part-time) — Feb. 2016-Aug. 2016

Bridgit, Waterloo, ON

- Led development of mobile app prototype using React Native; implemented core functionality such as project explorer and data synchronization
- Built native camera and image editor modules to access unsupported platform APIs
- Designed automated test suites using Appium and TestNG frameworks

Software Developer Intern — Jul. 2014-Aug. 2014

Alcatel-Lucent, Ottawa, ON

- Wrote data transfer protocols for over 15 client-server models using C# and Perl
- Fixed message boundary errors in existing protocols by introducing length prefixes
- Designed sanity checks to prevent denial-of-service attacks

Full Stack Website Developer (Part-time) — Jan. 2014-Apr. 2014

SWS Engineering Inc., Mississauga, ON

- Increased client requests by 30% by designing an interactive website with responsive web design
- Built foundation of client login system using PHP and MySQL
- Added web forms with input validation for clients to submit inquiries

PROJECTS

AssignmentTracker Android App — Feb. 2016-Jun. 2016

- Notifies users of upcoming due dates and suggests tasks based on their schedules
- Supports instant messaging and assignment file sharing over Wi-Fi P2P
- Java, SQL

SMS Internet Browser Android App — Jan. 2016

- Allows users to search Wolfram Alpha and Wikipedia without a network connection
- Interfaces web-based APIs with the phone's SMS capabilities
- Java, PHP

ImageGrabber Mobile/Desktop Apps — May 2015-Jun. 2015

- Fetches images from Flickr and Booru imageboards and resizes bitmaps into a fluid, scrollable view
- Java, Ruby, Nokogiri, SQL

MaplePlay Game Bot — Jun. 2013-Jun. 2014

- Built scripts to automatically train and gather items in the online game, Maplestory
- Converts game maps to graphs, using Dijkstra's algorithm to pick the fastest routes
- C++, Java, AutoIt