William McDonald

willgmcd@gmail.com
226·600·3960
350 Lester Street
Waterloo, ON N2L 3L1

Work Experience

Software Engineer, Facebook Inc., Seattle, WA. May – Aug. 2014

- Developed a document parsing system using modern C++11
- Extended a pipeline that processes over 500 million objects per day
- Created a prioritization algorithm for objects in the processing queue
- Refactored a C++ HBase interface for improved querying efficiency

JavaScript Developer, Bazaarvoice Inc., Austin, TX. Sept. – Dec. 2013

- Worked in a full JavaScript stack including node.js and PhantomJS
- Authored a library and website to detect product installation issues
- Built a web application in node.js with socket.io to view render speed data from a Kafka feed in real-time
- Designed and implemented a scraping tool in node.js to collect and analyse client configuration data, enabling better prioritization of work
- Contributed to four open-source projects used by Bazaarvoice

Python Developer, Wind River Systems Inc., Ottawa, ON, Jan. – Apr. 2013

- Architected a new distributed testing system with intelligent caching of test targets, which can improve testing speeds by up to 50%
- Created a web application using Python and MongoDB to aggregate code coverage results into easily queryable charts
- Automated conversion of test results into an HTML spreadsheet format

Personal Experience

- 5 years programming in C, C++, JavaScript, Python and more
- Tetris, Conway's Game of Life and Snake using HTML5 canvas
- Personal website, wmcd.ca, and GitHub account, @WalrusCow

Education

Bachelor of Mathematics in Computer Science with Business Option, University of Waterloo (expected graduation: 2016)

- Implemented Hearts in C++, with both human and computer players
- Among top 10 best optimized compilers for CS 241 course
- Implemented virtual memory and system calls for OS course