

EDUCATION

University of Waterloo

Bachelor of Applied Science, Computer Engineering, 2020

Part of University of Waterloo Computer Science Club and Engineers Without Borders

SKILLS

PROFICIENT: Java, Javascript, Python, C, Algorithms, Data Structures, jQuery, REST APIs, JSON, C#, HTML, CSS, Reverse Engineering, DevOps, Bash

WORKING KNOWLEDGE: C++, PHP, Operating Systems, Embedded Systems

TOOLS AND FRAMEWORKS: Eclipse, NodeJs, React, Sails, Express, Backbone, Angular, AWS, Android, Git, Linux, Cygwin, Docker, Vagrant, Jenkins

HARDWARE: Assembly, VHDL, FPGA, Oscilloscopes, Altera Toolchain

EMPLOYMENT

IBM

Software Developer

Toronto
May 2018 to Current

- Developed complex React components for an UI toolkit that all IBM Analytics sites use.
- Used Node to create a search algorithm as well as a local/session browser storage framework to render SVGs 23% more quickly.
- Championed 75% code coverage using codecov.io; Integrated it into the developmental workflow and wrote tests using Jest and Enzyme.

OPENTEXT

Software Developer (Enterprise Cloud Management)

Sept. 2017 to Dec. 2017

- Developed a feature that allowed 60, 000 previously deleted files to be restored to over 500 users; utilized Node.js and PostgreSQL.
- Rewrote the sites' authentication policy and implemented JWT token authentication to replace existing session authentication (cookies); used Node.js , Sails.js and Auth0

IBM

Integration Engineer (Algorithmics)

Jan. 2017 to April 2017

- Reverse engineered API calls for a financial business database and used Python extensively to create a CLI that replicated these calls. This internal tool is used daily in production and QA environments by all the integration engineers on the team.
- Automated simulations using Python to show the behaviour of stock options when they were manipulated by linear interpolation versus curve fitting via a SVI equation. Both of these techniques required 30 GB of raw data to be collected and parsed into specific formats which were then injected into Riskwatch for analysis.

IBM

Software Developer (Bluemix Cloud)

May 2016 to Sept. 2016

- Worked with React, Express and Webpack to create a full-stack generalized feedback feature which is fully integrable with Slack and can be used across all Bluemix microservices (currently has 1200 messages per week).
- Updated all the DevOps modals as well as the Toolchain user interface, and shipped these front end features to over 20,000 users all over the world.

PROJECTS

FPGA AUDIO PLAYER

Allows users to play and pause music, seek ahead/backwards in a particular song, and skip songs. The FPGA used for this project is an Altera Max10 and contains Altera IP cores such as the NIOS II Processor as well as PIO Buttons and Audio interfaces. The tool Quartus Prime was used, along with Verilog, to integrate these IP cores and add other hardware logic. NIOS II Software tools were used to program the NIOS II Processor in C.

YOUTUBETODROPBOX

Polls a user's youtube account every 4 hours for a list of liked videos. It then compares the list to a previously polled list to discover any new liked videos. It then uses youtube-dl to download the video as a m4a file if it is a music video under Creative Common Licence. Consequently, the service uploads the m4a file to your Dropbox under the folder "music". Written in Python and deployed to a Raspberry Pi, this project utilizes Dropbox's and Google Youtube 's APIs.

TWITTERFRIENDS

Webapp that uses the Twitter Search API to output tweets regarding specific topics made by individuals within a mile radius of one's geocode.

CHATBOT (CURRENTLY WORKING ON)

Analyzes all the tweets of an individual using Markov chains, and responds to questions with certain keywords; currently integrated as a Slack bot.