IVAN WONG

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SKILLS & INTERESTS

Java / Python / C / C++	Pandas / NumPy / PySpark / Hadoop / R	Ruby on Rails
HTML / CSS / JavaScript	Windows / Mac OSX / Linux	Git / GitHub
Bash Scripting	Agile / Scrum	Machine Learning / Data Analysis

WORK EXPERIENCE

Quality Assurance Automation Engineer Co-op *September 2016 – April 2017*
Absolute Software Corporation - Vancouver, B.C

- Practiced **Agile** and **Scrum** in 2 week sprints with 10 other developers
- Created, debugged and ran automation test scripts in **Java, Selenium** and **TestNG** for functional and regression testing
- Optimized various Java web traffic data scraping tool using hash map resulting in 1 hour decrease in the fetching process
- Designed, executed and analyzed performance testing scripts using **JMeter** and **LocustIO** to detect performance bottlenecks
- Improved problem solving, debugging skills and **OOP** principles by working on their large code base, fixing its bugs and improving their exception handling for future debugging

COMPETITIONS & PROJECTS

github.com/icwong

Anomaly Detection for US Power Consumption Data – Python *January 2018 – April 2018*

- Detection of US power consumption anomalies by using Density-, Clustering-, and SVM-Based anomaly detection techniques
- Partitioned complex datasets into smaller subsets by defining various time windows to perform Min and Max Outlier, Rolling Averages, Kalman Filtering and train each time window using **Hidden Markov Model** with **Python Scikit-learn** package

Auto Repair Management System (fixpapi.herokuapp.com) – Ruby on Rails *January 2018 – April 2018*

- Created a location-based web app that allow auto owners to hire mechanics to drive to their location and perform auto repair
- Worked on Vagrant deployment configuration for a VM where app was hosted

Encryption and Decryption Ciphertext Schemes – Java & Bash *January 2018 – April 2018*

- Encrypted a plaintext by applying substitution and transposition encryption schemes defined by a permutation with Diffie-Hellman algorithm to deliver a secret key between the client and server
- Implemented Vernam Cipher for stream encryption and used a pseudo-random generator to create identical sequence of keys

Machine Learning Weather Forecast Prediction – Python *September 2017 – December 2017*

- Structured and cleaned quantitative weather data for data classification analysis to predict the weather forecast from an image using machine learning pipelines. Techniques: Naïve Bayes, Nearest Neighbors, Support Vector Machines and Decision Trees.
- Implemented **Python**'s **Pandas, NumPy** and **Matpotlib** libraries to conduct data exploration and data visualization
- Involved data loading into the **Hadoop** Distributed File system to compute models, resulting in a ~3x data processing speed
- Extracted the image pixel colors: Red, Yellow and Blue, using Python Sci-kit image to train the model

Facebook Hacker Cup 2017 (facebook.com/hackercup) *January 2017*

- Developed problem solving skills through completing their programming puzzle

COOPR&S (cooprs.herokuapp.com) – Ruby on Rails *May 2016 – August 2016*

- Created a web app that allow students to share their co-op experience and for companies to promote their co-op opportunities
- Architected the model-view-controller to respond to user inputs and perform interactions on data model objects

EDUCATION

Simon Fraser University - Burnaby, B.C *September 2013 – December 2018 (Expected)*
Bachelor of Science in Computer Science, Major GPA: 3.21
Dean's Honours List: Spring 2018