Himmat Singh Tiwana

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EDUCATION

University of Victoria   Victoria, BC
B.Sc. in Computer Science (GPA: 3.7/4.0)   Jan. 2016 - Dec. 2020
- Relevant Coursework: Data Structures and Algorithms, Data Compression, Data-Mining, Deep Learning for Vision, Database Systems, Programming Languages, Operating Systems, Computer Networks

EXPERIENCE

University of Victoria   Victoria, BC
Teaching Assistant   Sept. 2020 - Dec. 2020
- Instructed labs with 30 students on **test-driven development (TDD)** using **Java** and **JUnit**, demonstrating best practises for **Object Oriented Programming** and refactoring
- Created **Bash** scripts to automate pulling and setting up of student repositories from **GitLab**, decreasing marking time by 30%

ACD Systems   Victoria, BC
Quality Assurance Analyst Co-op   May. 2019 - Dec. 2019
- Tested ACDSee Photo Studio Ultimate (2020) and assisted with design of 3 new features: Face-Recognition, Auto Guidelines and HDR
- Developed a browser tool with **JavaScript** and **CSS** to help test and improve the new Facial-Recognition model, removing the need for manual data entry, and reducing testing times by 50%
- Automated environment configuration and clean up steps of the testing workflow using **Bash** scripts saving 5 minutes per test cycle
- Coordinated with overseas teams in China and Japan to assure consistent product quality and image for VideoStudio in 3 different languages

Translink   Vancouver, BC
Student Software Test Analyst   May 2018 - Dec. 2018
- Automated testing of TransLink websites using **Selenium** and **C#** based **Atata** framework, improving on manual testing times by over 70%
- Tested NextBus APIs using **Jmeter** and provided usage insights to dev team, that led to a 30% improvement in service availability during rush hour
- Orchestrated migration of 3 automation code repositories from **SVN** to **Git** and conducted 4 source control training sessions for 6 members of the automation team

PROJECTS

Vancouver Living Data Visualization   Jan. 2020 - Mar. 2020
htiwana.github.io/LivingInVancouver
- Developed an interactive visualization with **JavaScript**, JS library **D3**, **CSS** and **HTML** that displays income, demographic and living expense trends in Vancouver over the last 20 years

MPEG Video Compressor   Jul. 2020 - Aug. 2020
- Developed a MPEG 1 style video compressor in **C++**, using advanced techniques including Huffman Coding, Fourier Transforms and Run Length Encoding
- Optimized performance to achieve a 16x compression ratio and real time decompression on raw videos

PROGRAMMING SKILLS

Languages: Python, Java, C++, SQL, JavaScript
Frameworks and Tools: Git, Selenium, Atata, JUnit, Bash, Gradle, D3