

# Himmat Singh Tiwana

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github.com/Htiwana

## EDUCATION

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### University of Victoria

Victoria, BC

B.Sc. in Computer Science (GPA: 3.7/4.0)

Jan. 2016 - Dec. 2020

- Relevant Coursework: Operating Systems, Computer Networks, Object Oriented Development, Data Structures and Algorithms, Data Compression, Database Systems, Programming Languages

## EXPERIENCE

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### University of Victoria

Victoria, BC

Teaching Assistant, Software Testing

Sept. 2020 - Dec. 2020

- Instructed labs with 30 students on test driven development using **Java** and **JUnit**, demonstrating best practises for OOP and refactoring
- Created **Bash** scripts to automate pulling student repositories from **GitLab** and setting up for marking, decreasing marking time by 30%

### ACD Systems

Victoria, BC

Quality Assurance Analyst Co-op

May. 2019 - Dec. 2019

- Tested ACDSee Ultimate 2020 and assisted with design of 3 new features: Face-Recognition, Auto Guidelines and HDR
- Developed a tool with **JavaScript** and **CSS** to help test the new Facial-Recognition feature, 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

New Westminster, 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 insights into peak usage leading 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

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### Vancouver Living Data Visualization

Jan. 2020 - Mar. 2020

- 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 from scratch in **C++**, using techniques learnt as part of coursework including: Huffman Coding, Fourier Transform and Run Length Encoding
- Optimized performance to achieve 16x compression ratio on raw video as well as real time decompression

## PROGRAMMING SKILLS

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**Languages:** Python, Java, C++, SQL, JavaScript, Standard ML

**Frameworks and Tools:** Git, Selenium, Atata, JUnit, Bash, Gradle, D3