



Joey Yu Shi

3rd year, Combined Mathematics and Computer Science

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Technical Skills

Programming:	Python, Java, C++, C, C#, Racket
Tools/Environments:	Git, Atom, Jupyter Notebook, Unity
Testing:	Unit testing
Markup languages:	HTML, LaTeX
Libraries:	Numpy, Matplotlib, Scikit-learn, Pygame

Personal Projects

December 2019 –
January 2020

Project:	Differential Equation Solver
Technologies:	Python
<ul style="list-style-type: none">- Used finite difference methods and Numpy array manipulation to solve differential equations- Implemented methods for plotting and animating solutions from differential equations- Designed GUI with tkinter for users to input parameters that are specific to their problem	

June 2020 –
July 2020

Project:	Trivia Train
Technologies:	Java, Android Studio
<ul style="list-style-type: none">- Collected questions by parsing a JSON from the open trivia API- Designed layouts and activities with tools from Android Studio- Implemented core game mechanic: pick a question from a set of 3 questions each round and collect as many points as possible before reaching 3 incorrect answers.	

Academic Projects

January 2020 –
February 2020

Project:	Image Compressor
Technologies:	C++, FTP, SSH
<ul style="list-style-type: none">- Created a hierarchical binary tree datatype to partition images based on colour variability- Implemented pruning algorithm to compress images	



February 2020 –
March 2020

Project: Border Fill

Technologies: C++, FTP, SSH

- Implemented stack and queue datatype from scratch
- Made colour picker classes that can detect edges in an image
- Used depth first search and breadth first search to flood fill images according to colour selection classes

Hackathons

January 2020

Name: NWHacks

Project: Bananos

Technologies: Java, Android Studio

- Created grocery optimization tool by comparing item prices between selected stores
- Implemented voice recognition using Android Speech API
- Developed functions for parsing speech for item names and quantity

Education

University of British Columbia

- Bachelor of Combined Mathematics and Computer Science
- Science Scholar and Dean's Honour List in 2019/2020 Winter Session

Work Experience

November 2016 –
June 2018

Position: Line Cook

Company: Earls

- Cooked dishes up to the Earls' restaurant standards
- Maintained a neat and sanitary workstation
- Prepared and portioned food
- Washed dishes and equipment

Volunteer Work

September 2016 –
June 2018

Position: Computer Lab Monitor

Company: Fraser Heights Secondary

- Managed booking of lab equipment for students and teachers
- Supervised the computer lab during lunch-time hours

Interests

Mathematics,
Programming,

Music composition,
Speed-cubing