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, Unity, MATLAB
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

- Created class structure for multiple different types of equations using object-oriented techniques
- Implemented functions that solves and visualizes differential equations by using numerical methods learned in-class
- Designed GUI by using the standard Python interface: Tkinter

June 2020 – July 2020

Project: Trivia Train
Technologies: Java, Android Studio

- Collected questions by parsing JSON from open trivia API
- Designed layouts and activities
- 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 Mesher
Technologies: C++, FTP, SSH

- Created image grid data type using a doubly linked list
- Used pointer manipulation to implement various methods for creating a mesh between images.

| February 2020 – March 2020 | **Project:** | Border Fill |
| | **Technologies**: | C++, FTP, SSH |

- Implemented classes with different distance-based colour selection methods
- Designed a multi-point flood-fill method with edge detection to create animations of images being recoloured

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, | Music composition, |
| Programming, | Speed-cubing |