Joey Yu Shi

3rd year, Combined Honours Mathematics and Computer Science
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Technical Skills

Programming:	Python, Java, C++, C, Racket
Tools/Environments:	Github, SSH, FTP, Atom, Jupyter Notebook
Testing:	Unit testing
Markup languages:	LaTex
Data Science Libraries:	Numpy, Matplotlib, Scikit-learn, Pandas

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

September 2019 – November 2019

Project: Pet Blob
Technologies: Java, Android Studio, Reaper, Piskel

- Designed Android app game about nurturing a personal pet blob using Android Studio
- Designed inventory system and pet status system using object-oriented programming
- Created music and animation for background

Academic Projects

January 2020 – February 2020

Project: Image Mesher
Technologies: C++, FTP, SSH

- Created GridList data type using a doubly linked list
- GridList represents an image by partitioning the image into blocks of pixels which are stored in GridNodes
- Implemented functions for creating different meshes between two images by manipulating their respected GridNode pointers

February 2020 – March 2020

Project: Border Fill
Technologies: C++, FTP, SSH

- Implemented colour picker class for detecting edges along an image
- Applied depth-first search and breadth-first search algorithm to create a flood-fill function to colour the borders of images

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 Honours Mathematics and Computer Science
- Cumulative GPA: 4.33

Work Experience

November 2016 – June 2018

Position: Line Cook
Company: Earls

- Executed dishes to Earls' standard
- Maintain 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