

# Joey Shi

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# Education

University of British Columbia Mathematics & Computer Science 2018 – 2022

cGPA: 4.33 / 4.33

Science Scholar / Deans's Honour List

# Technical Skills

### **Programming Languages**

Python

Java

**Javascript** 

C++

С

C#

Assembly

#### Libraries

Sci-kit Learn

Numpy

Matplotlib

Pygame

### Tools / Environments

Git

Atom

Unity

Android Studio

Jupyter Notebook

LaTex

MATLAB

# **Projects**

### Differential Equation Solver | Python

- Used finite difference methods and Numpy array manipulation to solve differential equations
- Implemented methods for recording and animating solutions
- Designed GUI with TkInter for inputting parameters

#### Image Compression with Binary Trees | C++, FTP, SSH

- Created hierarchical binary tree datatype to partition images based on colour variance
- Used binary tree pruning algorithm to compress images

#### Trivia Train | Java, Android Studio

- Processes questions by parsing JSON from Open Trivia API
- Designed layouts and activities in Android Studio
- Implemented high score system and high score saving

# Work Experience

### University of British Columbia

### Undergrad Academic Assistant | July 2020 - August 2020

• Coded WeBWorK questions in Perl for UBC calculus students

#### Earls

#### Line Cook | September 2016 – June 2018

- Cooked panfry dishes during evening shifts 3 times a week
- Portioned food and washed dishes and equipment

## Hackathons

#### **NWHacks**

#### Bananos | Java, Android Studio

- Created grocery optimization tool by comparing item prices between selected stores
- Developed functions for parsing speech for item names and quantity