



# Joey Shi

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<https://github.com/joeyshi12>

<https://joeyshi.tech/>

## Education

University of British Columbia

Mathematics & Computer Science

2018 – 2022

cGPA: 4.33 / 4.33

Science Scholar / Dean's Honour List

## Technical Skills

### Programming Languages

Python

Java

Javascript

C++

C

C#

Assembly

### Libraries

Scikit-learn

Numpy

Matplotlib

Pygame

p5.js

### Tools / Environments

Git

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