Joey Shi

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Education

University of British Columbia

Mathematics & Computer Science
2018 – 2023
Cumulative Average: 91%
Science Scholar / Dean's Honour List

Technical Skills

Programming Languages

Python
Typescript
JavaScript
Scala
Java
Bash
C++
C

Frameworks / Libraries

Angular
Express
Socket.IO
React
Flask
Numpy
Matplotlib

Tools / Technologies

Git
Arch Linux
Vim
Android Studio
MATLAB
Microsoft Excel

Work Experience

Visier Inc.

Software Developer Intern | Jan 2021 – Dec 2021

- Worked in full-stack agile web development using Scala and Angular
- Implemented frontend UI for listing and configuring hierarchical tenant content packages
- Built backend API with a partner for reporting and flagging data issues in tenant data versions

University of British Columbia

WeBWorK Content Developer | Jul 2020 – Dec 2020

- Implemented WeBWorK questions in Perl for UBC calculus exams
- Incorporated visuals and animations into past questions using JavaScript and the Desmos API

Projects

Differential Equation Solver | Python

- Used efficient finite difference algorithms to solve custom ordinary and partial differential equations
- Implemented interactive animations and plots for generated solutions
- Designed graphical user interface with TkInter
- Added support for exporting solutions as XLSX files

Multiplayer Browser Platformer | Angular, Node, Socket.IO

- Designed and deployed a real-time multiplayer browser platformer
- Wrote web socket endpoints to update and broadcast player data
- Implemented a character behaviour script with animation, 2D physics and tile collision logic from scratch

Linux Desktop Environment | Arch Linux, ZSH, Vim

- Configured an efficient keyboard-based tiling desktop environment over an Xorg server using BSPWM
- Researched and documented how to set up network, bluetooth, speakers, and display monitors in a Github repo
- Wrote an automated shell script for installing assets and linking dotfiles

Trivia Train | Java, Android Studio

- Requests and processes JSON data from the Open Trivia API to run a high-score based quiz game
- Wrote simple layouts in xml for user interactions
- Implemented local high score caching