


# JOEY SHI

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## TECHNICAL SKILLS

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**Languages:** Python, JavaScript, TypeScript, C, C++, Bash, Scala, Java, HTML, CSS, SQL

**Frameworks/Libraries:** Angular, Express, Socket.IO, React, Flask, Numpy, Matplotlib, ScalaTest, Jasmine, PyTest

**Tools/Technologies:** Git, Linux, Vim, Android Studio, MATLAB, Microsoft Excel, Docker

## EXPERIENCE

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### Visier Inc.

**Jan 2021 – Dec 2021**

*Software Developer Intern*

*Vancouver, BC*

- Worked in full-stack web development using tools, such as Scala and Angular.
- Implemented Angular UI components for listing and configuring hierarchical tenant content packages.
- Built a Scala backend API with a partner for reporting and correcting data issues in tenant data versions.
- Mentored other co-op students on debugging and traversing large code repositories.
- Wrote and fixed extensive unit tests in ScalaTest and Jasmine.

### University of British Columbia

**Jul 2020 – Dec 2020**

*WeBWork Content Developer*

*Vancouver, BC*

- Implemented WeBWork questions in Perl for UBC calculus assignments and exams.
- Collaborated with multiple professors to improve exam length, difficulty, and clarity.
- Explored new ways of incorporating visuals and animations into questions using JavaScript and the Desmos API.

## PROJECTS

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### Differential Equation Solver | Python, Matplotlib, Tkinter

**Dec 2019 – Present**

- Implemented efficient finite difference algorithms to solve ordinary and partial differential equations.
- Designed a graphical user interface in Tkinter and added animated plots for visualizing the generated solutions.
- Built a CI/CD pipeline with PyTest, Tox, and Github Actions.
- Published the application on the Python Package Index.

### Multiplayer Browser Platformer | Angular, Node, Socket.IO, Docker

**Dec 2021 – Present**

- Designed and deployed a real-time multiplayer browser platformer on Heroku.
- Built a backend web socket API to update and broadcast player data.
- Implemented logic for player movement, animation, 2D physics, map design, and tile collision.
- Containerized the application with Docker and pushed an image to the Docker Hub registry.

### Linux Desktop Environment | Arch Linux, Zsh, Vim

**Mar 2021 – Present**

- Configured an efficient keyboard-based tiling desktop environment from scratch using Xorg and BSPWM.
- Wrote shell scripts for automating installing assets and linking dotfiles.
- Automated complex multistep desktop actions by writing shell scripts for SXHKD hotkeys.
- Researched and documented how to set up network, bluetooth, speakers, and display monitors in a Github repo.

### Trivia Train | Java, Android Studio

**Dec 2019**

- 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.

## EDUCATION

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### University of British Columbia

**Sep 2018 – May 2023**

*Bachelor of Science | Combined Major in Computer Science and Math*

*Vancouver, BC*

- Cumulative GPA: 91.1%
- Dean's Honour List (2018 – 2021); Science Scholar (2019)

## SCHOLARSHIPS

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### Stanley M. Grant Scholarship in Mathematics

**Jan 2021**

### Charles and Jane Banks Scholarship

**Sep 2020**

### Trek Excellence Scholarship

**Aug 2020**