JOEY SHI

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TECHNICAL SKILLS

Languages: Scala · Java · Python · TypeScript · JavaScript · HTML5 · CSS3 · C/C++ · SQL
Frameworks/Libraries: Angular · Node.js · D3.js · Flask · Pandas · PyTest · Javalin · ScalaTest
Tools/Technologies: Visual Studio · Neovim · Vim · Zsh · PowerShell · tmux · Git · Arch Linux · Docker

EXPERIENCE

Visier Inc.   April 2023 – Present
Software Developer II   *Vancouver, BC*
- Worked as an independent contributor for both the Data Connectors and Data Workflows teams.
- Developed high-priority data-onboarding tools that addressed customer needs, directly enabling contract renewal.
- Implemented data visualization libraries and UI components in Angular to simplify the data load configuration process.
- Mentored co-op students on REST APIs, network debugging, and traversing large code repositories.

University of British Columbia   Jul 2020 – Apr 2023
Teaching Assistant   *Vancouver, BC*
- Led tutorials for 2 different sections of a third-year computer networking course.
- Designed PrarieLearn exam questions for the computer networking course.
- Acommodated first-year calculus tutorials for 2 different sections.
- Implemented WeBWorK questions in Perl for calculus assignments and exams.

Vital Mechanics Research   May 2022 – Oct 2022
Software Developer   *Vancouver, BC*
- Researched topics in geometry processing and CAD software for clothing simulation.
- Developed a pipeline for extracting and inferring garment geometry and stitches from GLTF and DXF files.
- Applied numerical methods and graph theoretic approaches to infer information about garment stitching.

PROJECTS

PC Builder Website | *Java · Angular · SQL · Docker*   Nov 2023 – Present
- Implemented a full-stack web application for browsing PC builds and picking PC components.
- Designed an SQL database schema and REST API to support a variety of CRUD operations.
- Wrote build scripts and docker-compose files to streamline the deployment process.
- Self-hosted the application on a Raspberry Pi.

Multiplayer Browser Platformer | *TypeScript · Node · Socket.IO*   Dec 2021 – Present
- Designed a real-time multiplayer browser platformer using the HTML5 Canvas API.
- Built a backend web socket API to update and broadcast player data.
- Implemented logic for player movement, animation, physics, map design, and tile collision.

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.

EDUCATION

University of British Columbia   Sep 2018 – May 2023
Bachelor of Science | Combined Major in Computer Science and Math   *Vancouver, BC*
- Cumulative GPA: 91%
- Dean's Honour List (2018 – 2021); Science Scholar (2019)

SCHOLARSHIPS

Stanley M. Grant Scholarship in Mathematics   Jan 2021

Charles and Jane Banks Scholarship   Sep 2020

Trek Excellence Scholarship   Aug 2020