

Brian F. Moniaga

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EDUCATION

University of British Columbia

Vancouver, BC

B.Sc. Honours Computer Science.

September 2022 – May 2027

- Awards: J. Fred MUIR Memorial Scholarship in Science, Science Scholar/Dean's Honour List.

EXPERIENCE

Data Analyst Intern

May 2024 – Present

TC Energy

Calgary, AB

- Developed PowerBI dashboards for 5+ teams, integrating key metrics to enhance data-driven decision-making.
- Created a library of 10+ custom visuals in PowerBI using TypeScript, D3.js and Three.js.
- Automated data entry and cleaning processes into AWS S3 using Python, reducing processing time by 80%.
- Optimized SQL queries to extract, and transform data from AWS, improving report generation efficiency by 30%.

Undergraduate Teaching Assistant

January 2024 – April 2024

University of British Columbia

Vancouver, BC

- Assisted in teaching CPSC 213 - Introduction to Computer Systems by conducting lab sessions and office hours.
- Taught material about Assembly for RISC systems, memory allocation, and multithreading in C and Java.

Software Engineer

November 2021 – July 2022

Simon Meyrowitz & Meyrowitz P.C

New York, NY (Remote)

- Assisted in transitioning an internal application to WPF using C# and XAML, improving it's user interface.
- Developed a report system in using C# to generate PDF reports from MySQL database based on user queries.
- Optimized MS Access to MySQL data migration with Python, reducing time from 1.5 hours to 10 minutes.

ACTIVITIES

Open-Source Contributor

September 2024 – Present

RISC-V International (LFX Mentorship Program)

Remote

- Built a website for the RISC-V ISA using Next.js and Shadcn/UI, with automatic updates of new instructions.
- Improved Sail Parse by adding support for parsing extensions in the RISC-V Sail specification using OCaml.

Backend Developer

September 2023 – May 2024

UBC Launchpad

Vancouver, BC

- Worked on a full stack web application built with Go and React, designed to track students' academic progress.
- Implemented RESTful APIs to calculate user's progress towards various program requirements using Go.

PROJECTS

STEP-Writer | C++, CMake, FTXUI, GoogleTest

- Made a terminal-based text editor in C++ using FTXUI, incorporating Vim motions for efficient text navigation.
- Integrated tree-sitter for generating Abstract Syntax Trees (AST) to enable dynamic syntax highlighting for multiple programming languages.
- Built a hierarchical directory tree view, allowing users to intuitively navigate and manage files within the editor.

Tales of Player One. | C++, CMake, SFML

- Developed a series of mini-games such as tetris and platformers in C++ using SFML.
- Made a custom game engine with various components such as Asset Manager, Input Manager, State Machine, etc.
- Implemented an Entity Component System (ECS) using EnTT, enabling scalable game object management.

RoomRival | React, TypeScript, Socket.io, MappedIn

- Created a multiplayer cross-platform ice-breaker game, allowing players to claim rooms and compete for control.
- Utilized React, TypeScript and Socket.io for real time communication enabling instantaneuos updates.
- Featured on MappedIn's blog as runner-up for best use of their API at nwHacks.

TECHNICAL SKILLS

Languages: C, C++, C#, Go, Java, JavaScript, Python, TypeScript, SQL, HTML, CSS.

Frameworks: Django, Pandas, Raylib, React, Numpy.

Tools: Unity, Git, Postman, PowerBI, AWS, Linux.