UBC Science Co-op

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Brian Fransis Moniaga

Year 2, Computer Science and Statistics major

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Skills

Programming Languages Python, R, Java, C#, C++, JavaScript, PHP.
Web Development Django, React, HTML, CSS.
Database MySQL, SQLite, Apex Oracle, Microsoft Access.
Tools Unity, Git, GitHub, JUnit.

Technical Work Experience

UBC Mars Colony (Engineering Design Team)

Vancouver, BC

Web Developer

August 2022 - September 2023

- Overhauled the website at ubcmarscolony.com with a team of 3 using **React JS**, **HTML**, **CSS**, and **JavaScript**.
- Implemented Google Sheets API to the website, resulting in a pseudo-database which allows easy access for modifying data.
- Worked in interdisciplinary team regarding the key-details needed to be added on the website.

Simon Meyrowitz P.C

Remote

Software Engineer

November 2021 - July 2022

- Developed and implemented a **Python** and **SQL**-based algorithm to securely and seamlessly migrate data from **Microsoft Access** to **MySQL**. Speeding up database migration time from 1 hour to only 11 minutes.
- Utilized **Python** and **C#** to analyze and design a robust algorithm that effectively cleaned over **1000+** instances of incorrectly formatted data, significantly enhancing data quality and reducing errors.
- Created a report system for their **WPF**-based application which uses the **.NET framework**. Integrated the Soundex algorithm to fix typo mistakes inputted by a user.

Personal Projects

Full Stack Web Application (RateMyProfessors clone)

github.com/BrianAnakPintar/TARA

- Worked in a team of 3 to build and deploy a full stack web application using **Django** in **Python** and **DigitalOcean** for deployment.
- Designed and executed normalization process for an **SQLite** database, improving data integrity and reducing redundancy.
- Added user authentication system using email verification, reducing spam and unauthorized access.

Schedule Comparer Java GUI Application

github.com/BrianAnakPintar/ScheduleComparer

- Developed a GUI application using **Java** and **Java Swing**, enabling users to see overlapping time slots in their schedule.
- Followed object-oriented principles such as inheritance, applying design patterns and appropriate unit tests.
- Added data persistence using **JSON** allowing users to save and load schedules seamlessly.

AI Generated Note Summary using Eye Tracking (Hack the North 2023)

https://devpost.com/software/eyeq

- Used **Open CV** in **Python** to create computer vision which is used to track users eye to know if they are looking at or away from the screen when they are watching a lecture video.
- Applied **Cohere's LLM** to generate personalized notes based on the timestamp whenever user looks away from the screen.
- Used **Taipy** to create the frontend and implemented **CockroachDB** to store summaries of videos as well as questions related to it.

Mathematical Model Optimizer (Regression)

github.com/BrianAnakPintar/FunctionOptimizer

- Implemented a robust application in **Unity** and **C#** which optimizes various mathematical models so that it best fits the given data using the Least-Square method from Linear Algebra.
- Created a custom Matrix Class along with algorithms to do matrix operations such as matrix multiplication, transpose, RREF, etc.
- Designed and implemented a simple UI, showcasing the ability to combine mathematical rigor with user-friendly design principles

Education

University of British Columbia

Vancouver, BC

BSc in Computer Science and Statistics

Expected Graduation - 2026

- **Awards**: J. Fred MUIR Memorial Scholarship in Science (2023), Science Scholar/Dean's Honour List (2023)
- **Activities**: Game Development Club, UBC Launch Pad (Software Engineering Club), UBC Computer Science Student Society, UBC Undergraduate Statistics Society