Brendan Lai

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Work Experience

BC Children's Hospital – Digital Health Innovation Lab   **Vancouver BC, CA**

Data Scientist – Pain Risk Prediction (Part-time)   *September 2022 – April 2023*
- Identify and develop appropriate prediction models and risk factors to explore pain trajectory patterns within data
- Data cleaning, visualization, feature engineering for further analysis and evaluate model success based on local collected clinical data

Developer (Co-op) – Data Analytics and Visualization Tools   *May 2022 – August 2022*
- Developed Post Operative Follow up (POFU) dashboards helping anesthetists review their performance over time compared to their peers
- Lead and developed Pediatric Difficult Intubation dashboards assisting the department to understand the most effective intubation techniques
- Built scripts that clean and merge a variety of data sources to conduct data analysis for pain risk prediction studies (POQI)

Canadian Imperial Bank of Commerce (CIBC)   **Toronto, Ontario, CA**

Business Systems Analyst Co-op – (CIBC Exceptional Co-op Student Award Recipient)   *September 2021 – April 2022*
- Built automated routines for analytical reports and Tableau dashboards to monitor KPIs (process metrics) and their performance over time
- Lead project to mitigate data loss in preparation for transitioning between tools reducing required data migrations by 65%
- Cleaned and analyzed data to derive actionable insights to improve the workflow efficiency both in teams and applications

MDA Ltd.   **Halifax, Nova Scotia, CA**

Software Engineer Co-op – Test Automation   *May 2021 – August 2021*
- Designed and developed automated tests for the growing the project's smoke and regression test suites by 50% and 20% respectively
- Refactored and optimized the precondition steps reducing the runtime by 60% and improved smoke test's reliability to 100% verification

Woodgrove Technologies Inc.   **Toronto, Ontario, CA**

Quality Analyst Intern   *May 2019 – August 2019*
- Built and executed regression tests for quality, load handling and other software deficiencies participating in AGILE and Scrum practices
- Lead SRED project: Using Unreal Engine 4 to generate virtual datasets replicating field images to improve segmentation techniques

Education

The University of British Columbia, Bachelor of Applied Science   **September 2018 – May 2023**
Integrated Engineering: *Computer Engineering Major & Engineering Physics Minor*   *Deans Honour List*

Technical Skills

Programming languages: Python, Java, C#, JavaScript
Methodologies and Technologies: PowerBI, Agile, Data Life Cycle, Git, Jupyter, Pandas, Tableau, Automation, software testing

Capstone & Technical Projects

Overlap: Music Sharing Web Application   **UBC (IGEN330)**

Backend Team Lead & Algorithm Developer   *October 2020 – April 2021*
- Built a Spotify integrated web application returning users listening habits and letting you discover your friend's music tastes
- Designed and developed: data schemas, routing, and middleware functions for our RESTful API and its endpoints
- Coded and developed playlist generation algorithm and users' favourite songs incorporating collaborative filtering and clustering

Converting Coordinates Between Various Datums   **UBC Dept. of Geological Engineering**

Python Developer   *July 2020 – August 2020*
- Developed a windows application to convert batches of coordinates into different formats and between different geodetic vertical datums.
- Lead development team and conducted code reviews to minimize bugs and ensure code quality

Student Design Teams

UBC Solar

Software and Battery Mechanics Team Member   *January 2020 – April 2021*
- Developed the cars battery model in python (numpy) and ran simulations to optimize our race strategies
- Designed and manufactured the car's HV Lithium-Ion battery pack including the control plate, modules, and enclosure