

Patrick Chan

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Work Experience

Thrive Health

Software Developer Intern

Sep 2020 – Present

Vancouver, BC

- Front and back-end development using Node.js, TypeScript, React, Redux, HTML5, CSS, Postgres
- Implement accessibility improvements to the Canada COVID-19 App to enhance usability for visually impaired users
- Collaborate with the UX team to design, develop, and test product UI for screen reader compatibility

UBC Aging, Mobility, and Cognitive Neuroscience Lab

Research Assistant

Nov 2016 – Jun 2019

Vancouver, BC

- Study coordinator for a 6-month randomized controlled trial on sleep, aging, and cognition involving 96 seniors
- Developed and managed REDCap and FileMaker databases for over 7 longitudinal studies with over 700 total participants
- Streamlined processing of cognitive data using automated scripts in R and Excel
- Recruited, screened, and administered cognitive tests and physical assessments on over 300 participants

BC Children's Hospital Research Institute

Research Assistant

Jan 2015 – Sep 2015

Vancouver, BC

- Co-managed 2 pediatric diabetes studies, collected clinical data, and conducted preliminary data analysis
- Designed study components related to recruitment, logistics, and data collection and management

Projects

Potatofy | Python

- Questrade integrated desktop GUI application for simplified rebalancing of investment portfolios
- Calculates shares to buy/sell using current market prices to achieve users' target asset allocations
- Securely requests user financial information using OAuth 2.0 authentication via the Questrade API

contrast-checker | Rust

- Rust-based CLI tool for calculating contrast ratio between two colours based on Web Content Accessibility Guidelines
- Implemented support for calculations using RGB or Hex colour models

ADASPlusML | Python, Scikit-learn, pandas

- Trained a machine learning model with Scikit-learn to score the ADAS-Cog Plus cognitive assessment for Alzheimer's Disease
- Performed 10-fold cross validation to test the accuracy of the multiple linear regression model

InsightUBC | TypeScript, JavaScript

- Full stack software engineering project for parsing and querying datasets with UBC building and course data
- Designed database and implemented an interpreted Abstract Syntax Tree (AST) query language
- Implemented REST endpoints to handle dataset and query API requests from a front-end controller

Education

University of British Columbia

Bachelor of Computer Science (Integrated Computer Science)

Sep 2019 – Present

Vancouver, BC, Canada

- Cumulative GPA: 92.1%
- Expected graduation: December 2021

University of British Columbia

Bachelor of Science in Integrated Sciences (Neuroscience & Physiology)

Sep 2011 – May 2016

Vancouver, BC, Canada

- Cumulative GPA: 86.3%

Skills

Languages

TypeScript, JavaScript, Java, Python, Rust, C++, R, SQL, HTML, CSS

Tools

Git, Node.js, PostgreSQL, Docker, LaTeX

Frameworks

React, Redux, JUnit, Mocha, Chai, REDCap