

# Patrick Chan

✉ pat@patchan.dev | 🏠 patchan.dev | in chanpat | 🌐 patchan

## Work Experience

### Amazon Web Services (AWS)

May 2021 – Aug 2021

Software Development Engineer I Intern

Vancouver, BC

- Full stack development on the Simple Queue Service (SQS) Workload Management Team using Kotlin, Java, Spring, and JUnit
- Streamlined on-call operator workflows for identifying, diagnosing, and resolving issues
- Improved internal operational dashboard visibility of critical backend metrics and alarm states

### Thrive Health

Sep 2020 – Apr 2021

Software Developer Intern

Vancouver, BC

- Full stack development using Node.js, TypeScript, React, Redux, PostgreSQL, HTML5, CSS
- Developed and maintained a scalable RESTful API integration for generating bulk COVID-19 test requisitions using AWS Lambda, Amazon SQS, and Amazon S3
- Increased the speed of costly user access checks by approximately 500% by identifying a use case for caching
- Improved accessibility of the Canada COVID-19 App to meet WCAG 2.0 guidelines by streamlining screen reader behaviour with clear ARIA labelling and component hover & focus states

### UBC Aging, Mobility, and Cognitive Neuroscience Lab

Nov 2016 – Jun 2019

Research Assistant

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 R scripts and Excel macros
- Recruited, screened, and administered cognitive tests and physical assessments on over 300 participants

## 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

## Education

### University of British Columbia

Sep 2019 – Present

Bachelor of Computer Science (Integrated Computer Science)

Vancouver, BC, Canada

- Cumulative GPA: 92.1%
- Expected graduation: May 2022

### University of British Columbia

Sep 2011 – May 2016

Bachelor of Science in Integrated Sciences (Neuroscience & Physiology)

Vancouver, BC, Canada

- Cumulative GPA: 86.3%

## Skills

### Languages

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

### Tools

Git, Node.js, PostgreSQL, Docker, LaTeX

### Frameworks

React, Redux, Spring, JUnit, Mocha, Chai, REDCap