

Nathan Aghilan

403-400-3726 | aghilan@mainstream.so | [LinkedIn](#) | [GitHub](#)

EDUCATION

University of British Columbia

Bachelors in Computer Science and Business, GPA (3.90 / 4.33)

Vancouver, BC

Graduating April 2024

- Courses: Object Oriented Programming in Java, Data Structures and Algorithms, Computer Systems
- Certifications: AWS Cloud Practitioner, Microsoft Azure Fundamentals

TECHNICAL SKILLS

Languages: TypeScript, Python, Java, JavaScript, SQL

Frameworks and Libraries: React, ExpressJS, JUnit5, Flask, Redux, Serverless

Developer Tools: Amazon Web Services, Git and GitHub, VSCode

EXPERIENCE

Incoming Software Engineering Intern

Spring 2023

Intuit

Edmonton, AB

Founding Engineer

Nov 2022 – Present

Mainstream Labs

Vancouver, BC

- Full stack developer at a small pre-seed startup raising 1.5M in funding from Samsung Next and Lemniscap
- Refactored ReactJS codebase to optimize UI performance by 15% by code splitting and reducing re-renders
- Developed a real-time concurrent document editor using WebSockets, NextJS and TypeScript

Software Developer

Sept 2022 – Present

UBC Bolt

Vancouver, BC

- Designed architecture and executed the development of the web application with React, NodeJS and AWS
- Reduced server costs by 80% by refactoring codebase to use serverless functions with AWS Lambda
- Led a team of developers to convert wireframes into React code following best practices

Computer Science and Math Tutor

Sept 2020 – Sept 2022

Self-Employed

Calgary, AB

- Worked one-on-one with students seeking assistance in multiple subjects such as Math, CS, Physics
- Experimented with marketing strategies to eliminate bottlenecks increasing revenue by over 200% over 2 years
- Frequently taught areas such as Intro to Programming, Object Oriented Programming and Web Development
- Average improvement of 23% per student in Physics, 20% in Math, and 18% in Computer Science respectively

PROJECTS

Skyfall - Legacy Videos | *ExpressJS, React, TypeScript, PostgreSQL, Azure*

- Created REST API while following the MVC design pattern and JavaScript best practices
- Developed a multi-page React UI with a mobile-first approach following responsive web design principles
- Designed architecture allowing multiple endpoints to upload large video files to single Azure Blob Storage
- 50% reduction in latency of read operations by reorganizing Azure SQL DB to de-normalizing schema
- Reduced time to refresh by over 70% through caching API data, decreasing HTTP requests made

Linux File System | *Java, JUnit5, Java Swing*

- Developed both a terminal based and GUI based way to run Linux commands and interact with the file system
- Unit tested code with 100% test coverage for all classes and automated testing with GitHub Actions CI/CD
- Applied Object Oriented design patterns such as Singleton to reduce prop drilling with global state
- Implemented method to marshall JSON data read from disk to a Java Object and vice-versa

ABOUT ME

Interests: Stoicism, Canadian Personal Finance and Investing, Entrepreneurship

Fun Fact: I wrote a backtracking algorithm in Python that names South Indian babies based on their birthdays and parents' names which now generates on average \$60 CAD per day.