

# Aghilan Nathan

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## EDUCATION

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### University of British Columbia

Vancouver, BC

BCom - Bachelor of Commerce and Computer Science, GPA (3.95 / 4.33)

Graduating December 2024

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

## TECHNICAL SKILLS

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**Languages:** TypeScript, Python, Java, SQL

**Frameworks and Libraries:** React, ExpressJS, JUnit5, Flask

**Developer Tools:** Microsoft Azure, Git and GitHub, VSCode

## PROJECTS

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### Workout Tracker API | *Amazon Web Services, TypeScript, NodeJS, Serverless*

July 2022 - August 2022

- Provisioned Infrastructure as Code via AWS CloudFormation to automate multiple cloud service deployments
- Designed API with AWS Lambda architecture to reduce costs and subscribe to other AWS resource events
- Designed AWS DynamoDB schema given minimal relationships for high read/write speeds when indexing

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

July 2022 - August 2022

- Developed both a terminal based and GUI based way to run command Linux commands and interact with files
- Unit Tested code with 100% test coverage for all classes and automation 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

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

May 2022 - June 2022

- 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
- Reduced Latency by over 70% through caching API data decreasing HTTP requests
- Reorganized Azure SQL DB by de-normalizing schema reducing the latency of read operations by over 50%

### Finance Dashboard | *React, TypeScript, Supabase, PostgreSQL*

February 2022 - March 2022

- Users add expenses and stock portfolios which are visualized as graphs with React Charts
- Architected Database schema to reduce average latency given knowledge of the most common queries made
- Utilized multiple external API's like Yahoo Finance to ensure the latest stock performance was delivered
- Optimized Render Time by over 30% through decomposing React Components into sub-components

## EXPERIENCE

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### Private Tutor

Sept 2020 – Present

*Self-Employed*

*Calgary, AB*

- Worked one-on-one with students seeking assistance in multiple learning areas 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

## ABOUT ME

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**Interests:** Stoicism, Canadian Personal Finance and Investing, Entrepreneurship

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