Nicholas Fong

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EDUCATION

University of British Columbia   Vancouver, B.C.
Combined Major in Business and Computer Science   *Expected Graduation May 2026*
- **Key Courses**: Software Construction, Introduction to Relational Databases, Basic Algorithms and Data Structures, Introduction to Computer Systems, Business Statistics, Introduction to Software Engineering

EXPERIENCE

Data Engineer Co-op   September 2025 - December 2025
Royal Bank of Canada Global Asset Management   *Toronto, ON*
- Developing an automated ETL test harness to validate data integrity and quality post-transformation, integrated with **Apache Airflow** DAGs and containerized using Docker for seamless deployment pipeline integration

QA Automation Engineer Co-op   January 2025 - August 2025
Royal Bank of Canada Global Asset Management   *Vancouver, B.C.*
- Accelerated regression testing by **87%** through architecting parallel **Playwright** framework with Docker orchestration and Allure reporting, replacing legacy sequential framework
- Democratized test automation through keyword-driven framework POC, empowering non-technical QA team members to build automated tests using natural language keywords, increasing team velocity by **250%**
- Improved system reliability and cut manual intervention by **60%** by migrating legacy test scripts to **Apache Airflow** to automate backend workflows
- Reduced testing cycles by **70%** and increased defect detection by **45%** by engineering end-to-end Python/Selenium automation suites across database, API, and UI layers

Software Engineer Intern   June 2023 – January 2024
Binggrae   *Vancouver, B.C.*
- Achieved cost saving of **20%** by implementing an analytics dashboard to inform optimization strategies across departments using **Socket.io**, **Recharts**, and **Node.js**
- Addressed security concerns by encrypting and salting user information for a digital marketing campaign, ensuring robust data protection and compliance with privacy standards
- Improved initial page load times by **30%** by implementing lazy loading and code-splitting
- Integrated SEO best practices into the website's structure, contributing to improved search engine visibility and a **40%** increase in organic traffic

VOLUNTEERING

Student Director of Technology   May 2023 – September 2024
University of British Columbia Campus Ambassador Program   *Vancouver, B.C.*
- Integrated Stripe payment processing to eliminate cash payments and e-transfers, ensuring secure transactions and enhancing both security and ease of use for users while safeguarding sensitive payment information
- Achieved weekly time savings of 10 engineering hours weekly by employing project management tools, including **Jira**, to strategically organize objectives and oversee sprint cycles

PROJECTS

FitFlow AI | *Github* | *React, Golang, PostgreSQL, Docker, OpenAI API, MediaPipe*   October 2023 – January 2024
- Created a fitness app using React and Go featuring health tracking, pose-based coaching, and **OpenAI API** integration for personalized recipes, improving user experience and promoting holistic wellness
- Applied **MediaPipe Pose Estimation** computer vision framework to detect and correct improper exercise form, enhancing user safety and reducing the risk of injuries during workouts
- Integrated OpenAI API for personalized recipe recommendations, using prompt engineering to tailor suggestions and ensuring safety by implementing content moderation for dietary restrictions

TECHNICAL SKILLS

Languages: Java, C, C++, JavaScript, TypeScript, HTML5, CSS, R, Python, SQL, PHP
Frameworks: React, Express.js, MongoDB, Tailwind, Go, MySQL, PostgreSQL, Redux, Node.js, AWS, Next.js
Developer Tools: Git, Docker, Visual Studio Code, IntelliJ, WordPress, JIRA, Azure, Kanban, Waterfall