Brandon Yeung

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Education

University of Waterloo Expected 2031

Candidate for Bachelor of Software Engineering (Honours, Co-op), President's Scholarship of Distinction

Work Experience

Software Engineer Sep 2026 – Present

University of Waterloo MedTech Robotics *Waterloo, ON*

- Developed obstacle avoidance functionality for an autonomous boat using LiDAR, IMU, and GNSS sensor data
- Integrated ROS 2 navigation with Nav2 and Gazebo simulation to support waypoint navigation

Web Developer Jun 2026 – Present

University Health Network *Toronto, ON*

- Collaborated with healthcare professionals to publish medical resources on the Telerehabilitation website
- Designed intuitive and patient-centered layouts using WordPress editor and design tools
- Monitored site analytics and search engine optimization health to drive improvements to the user experience

Business Intelligence Assistant Jun 2026 – Sep 2026

University of Toronto, Scarborough Campus *Scarborough, ON*

- Trained predictive ML models (Scikit-learn) on 10,000+ historical student admission records; Trained Scikit-learn models on 10,000+ student records, achieving 90% graduation prediction accuracy using a decision tree and an R score of 0.78 for GPA prediction using linear regression
- Built an AI-powered chatbot to answer queries using Ollama, Llama 3, and Streamlit Chat Interface

Swim Instructor/Lifeguard Mar 2023 – Aug 2026

Toronto Athletic Camps *Toronto, ON*

- Instructed 300+ kids aged 4-12 years old of diverse swimming levels, tailoring lessons to accelerate individuals' learning and confidence
- Partnered with 10+ lifeguards to enforce safety, manage group dynamics, and deliver first-aid when required

Projects

Investment Portfolio Tracker | *Python, Pandas, NumPy, Matplotlib, yfinance, Tkinter* Sep 2025 – Apr 2026

- Co-developed a Python portfolio tracker using Pandas and NumPy to calculate realized gains and track $115,000 in CAD/USD investments
- Integrated live tracking via the Yahoo Finance API, implementing multi-region ticker handling and real-time foreign exchange conversion for accurate currency normalization
- Engineered data visualization using Matplotlib to benchmark our portfolio returns against market indices across subplots with automated date-axis formatting

Allergen Scanner | *Swift, SwiftUI, Vision, VisionKit, UIKit* Mar 2025 – Sep 2025

- Developed an iOS app that leverages Swift and SwiftUI to parse complex ingredient text and warn users of potential food allergens in real time
- Integrated Apple's Vision OCR framework to extract ingredient text from document scans and photo
- Matched user-selected allergen profiles against string keyword arrays to instantly highlight hidden ingredients

Technical Skills

Languages: Python, Java, C, Swift, HTML, CSS
Frameworks & Libraries: ROS 2, Nav2, SwiftUI, Scikit-learn, Pandas, NumPy, Matplotlib, Tkinter
Developer Tools: Git, GitHub, Linux, Gazebo, Xcode, VS Code, Ollama, WordPress

Awards and Recognitions

Governor General's Medal: Given to the student in the graduating class with the highest academic average
University of Toronto Book Award: For original thought and exceptional achievement in a broad context
AP Scholar: Recognizes students who have achieved a score of 3 or higher on 3 or more AP exams
Jacky Kim Philosophy Award: Awarded for critical reasoning, respect, and a vigorous spirit of inquiry