Bryan Lin

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Education

University of Waterloo Waterloo, ON

Bachelor of Engineering in Software Engineering, Co-op

- Received the *President's Scholarship* worth $2000

Technical Skills

Languages:Python, C, C++, SQL, JavaScript, TypeScript, HTML/CSS, Java
Frameworks: React, Node.js, Django, Express.js, Next.js, Flask, PostgreSQL
Developer Tools: Git, Google Cloud Platform, Docker, NeoVim, AWS, Firestore
Libraries: Pandas, NumPy, Matplotlib, TensorFlow, Scikit-Learn, React

Experience

Software Engineer Intern Jun. 2025 – Sep. 2025

Livewell *Montreal, QC*

- Enabled **12,000+** patients to understand blood test results by developing a full-stack AI chatbot using **Flask**, **Docker**, **GCP**, **OpenAI** , **Next.js**, and **Firebase**
- Increased user retention **22%** by creating a blood test visualization dashboard using **React** and **Chart.js**, simplifying complex medical data
- Accelerated product delivery by **collaborating** in a small cross-functional team and implementing **CI/CD pipelines** with **Git**, resulting in faster iteration cycles and smoother integration

Full-stack Developer Intern Feb. 2025 – Apr. 2025

Scholarship W. *Toronto, ON*

- Increased scholarship accessibility by matching **15,000+** students to personalized opportunities through a hybrid **recommendation system** that combined **collaborative** and **content-based filtering**
- Improved matching accuracy by **17%** for over **1,100+** scholarships by iteratively tuning algorithms and validating against real student–scholarship data
- Enhanced scalability and efficiency by developing a robust data preprocessing and feature selection pipeline with **Django REST APIs**, **SQL** integration, and optimized backend logic

Projects

Amazon Logistics Router | *Python, Algorithms, Network Optimization* GitHub

- **Amazon Robotics Hackathon Winner** — Developed a congestion-adaptive, bandwidth-aware routing algorithm for efficient package delivery
- Optimized delivery routes using advanced **Dijkstra's algorithm** and **BFS**, improving efficiency in large-scale fulfillment networks
- Collaborated with a team of 3 to outperform baseline logistics solutions across all competition tiers

BryteLinker | *C language* GitHub

- Building **Bryte Linker**, an interpreted programming language featuring a custom bytecode virtual machine in C
- Implementing a full **lexer, parser, and bytecode compiler** to translate high-level code into executable bytecode
- Designing an efficient **stack-based VM** to optimize instruction dispatch, memory use, and runtime performance

League of Studies | *Typescript, Supabase, React, Next.js, Docker* GitHub | Demo

- Won **1st Place in the MLH GoDaddy Challenge at JACHacks**, outperforming **100+** participants
- Engineered a multiplayer studying web application using Next.js, featuring death-match and cooperation modes
- Integrated **Gemini 2.5 Flash** for custom question generation from text/PDF to populate content automatically
- Managed user identity and data persistence by integrating **Auth0** authentication and a **PostgreSQL database**

Breast Cancer Tumour Classifier | *Python, TensorFlow, NumPy* GitHub

- Trained and tested multiple Supervised Learning Models, such as Support Vector Machines, Logistic Regression Models and **Neural Networks by scratch** using only NumPy to classify breast growths as benign or malignant
- Designed and built a MySQL architecture to efficiently store neural network training data, weights, biases, and architecture information, creating a persistent and scalable machine learning system
- Achieved obtaining an over **95%**precision score and an **90%** recall score by training the Support Vector Machine