Benson Yan

+1 778-302-9550 | b58yan@uwaterloo.ca | 1800benson.ca | linkedin.com/in/benson-yan | github.com/ch3mson

Education

University of Waterloo — **Waterloo, Canada**
Bachelor of Computer Science, AI Specialization & Combinatorics Minor — *2023 – Present*

- **Relevant Coursework:** Object Oriented Programming (C++), DSA (C), Combinatorics, Linear Algebra, Statistics

Experience

Compass Digital — **Toronto, Canada**
Data & AI Engineering Intern — *Sep 2025 – Jan 2026*

- **Incoming Fall 2025 Data Engineering Intern** to optimize supply chain management for food across North America

Caivan — **Ottawa, Canada**
Full Stack Software Engineering Intern — *Jan 2025 – Apr 2025*

- Built a responsive floor plan preview service in **React**, **TypeScript**, and **Node.js** that converts CAD files into SVGs for a customer facing application, enabling sales teams to drive a **40%** increase in customer retention
- Optimized **PostgreSQL** schemas to minimize redundant API calls, reducing floor plan load time from **10 to 2 seconds**
- Applied **CI/CD** pipelines with **Git**, **Microsoft Azure**, and **Docker**, resulting in a **30%** reduction in deployment times
- Developed a CAD plugin using **C# .NET** to automate **28** manufacturing rules, saving architects **10+** hours in weekly QA
- Constructed **30 RESTful API** endpoints with **ASP.NET Core** and **PostgreSQL** to service **3** internal business tools

Lovelytics & UTMIST — **Toronto, Canada**
Machine Learning Engineer — *Sep 2024 – Present*

- Co-authored **Multi-Agent LLMs for Business Users** - presented at Canada's largest undergraduate AI conference
- Led the development of a distributed multi-agent system to generate long-form business reports with **Python** and **LangGraph** to overcome output limitations of traditional LLMs from **800 to 5,000+** words
- Designed **Retrieval Augmented Generation (RAG)** pipelines with **vector stores** and **OpenAI embeddings** to process private company data, providing agents with relevant context and boosting report factual accuracy by **30%**

Cornerstone Realty Marketing — **Toronto, Canada**
Business Analyst Intern — *May 2024 – Aug 2024*

- Created a data analytics dashboard to model condo prices based on neighbourhood demographics with **Python**, **Streamlit**, and **Matplotlib** to save business analysts **3+** days per case study

Projects

Rizz Glasses (100,000+ impressions) | *Python, Flutter, FastAPI, LangGraph, LLM, Supabase*

- Developed an AI conversational assistant for the Meta Ray-Bans using **Python**, **LangGraph**, **Whisper-V3**, and **Llama-3.3-70b** to orchestrate a real-time agentic flow with speech to text, and text to audio capabilities
- Implemented **InsightFace** to save and identify users from **Supabase**, enabling a feature to save conversational history
- Deployed the agentic model as a back-end service using **FastAPI**, providing **RESTFul APIs** to the **Flutter** app interface

BetUFC | *Python, Docker, Google Cloud, scikit-learn, NumPy, TypeScript, Next.js, Flask*

- Built a predictive model using **Random Forest** on **8,000** UFC fights to achieve **82%** accuracy in predicting fight outcomes
- Used **multithreading** with **BeautifulSoup**, **NumPy**, and **pandas** to scrape, clean, and re-train fight models at **50x** speed
- Deployed the predictive model as a microservice using **GitHub Actions**, **Docker**, **Google Cloud Run**, and **Flask**

Veyesor (McHacks 12 Winner) | *Python, OpenCV, Socket.io, WebRTC, Flask, React*

- Created a live panoramic video stitching application using **OpenCV** homography mappings and Gaussian blending to merge multiple iPhone camera feeds via **WebRTC** to create a 180-degree, unobstructed view of a vehicle's surroundings
- Awarded 'Most Forward-Thinking Project' among **500+** participants at McGill University for innovative use of **VR** and computer vision to enhance driver safety

Cook or Cooked (GenAI Hackathon @ UofT) | *React Native, Express.js, Supabase, Groq*

- Created an AI budgeting app with image recognition on foods to identify savings from home cooked vs restaurant meals
- Implemented interactive visuals for users using **React Native**, **D3.js**, and **Supabase** to store and track savings over time

Technical Skills

Languages: TypeScript, JavaScript, Python, C#, C++, Java, HTML, CSS, SQL, Bash
Frameworks & Libraries: React, Next.js, Svelte, Node.js, Express.js, ASP.NET Core, FastAPI, LangGraph, OpenAI, Groq
Tools: Git, Postman, Google Cloud, AWS, Azure, Docker, Kubernetes, PostgreSQL, MongoDB, Linux