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Professional Experience

City AI (small startup) — *A.I. Software Engineer*

Toronto, May 2025 – Present

- Design and implement an **autonomous research system** that crawls the web to identify emerging problems, inefficiencies, and business opportunities.

Tech Stack / Tools: Python, Flask, Bootstrap, Llama 3.1, Replicate API, Gunicorn, Render

Andrew Peller, The Wine Shop — *Sales Representative & Software Developer* **Toronto, Jun 2022 – Jan 2023**

- Developed a **barcode-based inventory management system** in C++ and Qt to improve operational efficiency and reduce manual tracking.

Tech Stack: C++, Qt Framework, SQL

Education

University of Toronto — *Bachelor of Applied Science in Computer Engineering*

Oct 2025

Projects

Equity Factor Analytics Engine

Python, Pandas, NumPy

Built a financial analytics engine that retrieves equity market data and computes key quantitative factors including momentum, volatility, moving averages, and volume-based indicators. Implemented a simple long/short strategy and performed historical backtesting with Sharpe ratio and drawdown analysis. Demonstrates strong analytical reasoning and interest in investment technology.

AI Portfolio Assistant (LLM)

Flask, Bootstrap, Llama 3.1, Replicate API

Developed an interactive assistant that answers questions using contextual data and retrieval-augmented generation. Designed vector retrieval and prompt-engineering logic and deployed using Gunicorn on Render. [🌐 Live Demo](#) — [🔗 GitHub](#)

Multi-User Chat Server with Berkeley Sockets

C/C++, MySQL

Created a multi-threaded high-performance chat server supporting concurrent clients and multiple chat rooms. Implemented authentication, message routing, and persistent MySQL-backed storage. [🌐 GitHub](#)

Cloudant REST API (To-Do List App)

Flask, Bootstrap, Cloudant NoSQL

Built and deployed a RESTful CRUD application using Jinja2 templates, Cloudant NoSQL, and Flask. [🌐 Live Demo](#) — [🔗 GitHub](#)

Power BI Transportation Sales Dashboard

Power BI

Developed a business intelligence dashboard showing KPIs, revenue trends, and performance metrics. [🌐 GitHub](#)

Barcode Inventory Management System

C++, Qt Framework

Created a desktop application with barcode scanning and SQL integration to automate store logistics. [🌐 GitHub](#)

Technical Skills

Languages: Python, C/C++, SQL, MATLAB

AI & Data Tools: Scikit-learn, NumPy, Pandas, Power BI, PyTorch, TensorFlow

Web & Cloud: Flask, Bootstrap, Jinja2, Render, Gunicorn, Cloudant

Systems: Linux, Unix, Windows, Raspberry Pi

Core Competencies: Data Analysis, Software Development, Backend Systems, Distributed Systems Basics

Finance & Economics Learning

- *The Portable MBA in Finance and Accounting* — corporate finance and financial statements.
- *Investments* by Zvi Bodie — risk/return, portfolios, equity markets.
- *Microeconomics* by Krugman — market incentives, decision frameworks.
- *Machine Learning & Data Science Blueprints for Finance* — applied ML for financial systems.

Summary of Qualifications

- Strong programming foundation in Python and C/C++, with experience in multi-threaded systems and backend.
- Analytical thinker with experience building quantitative tools (factor analytics engine, data pipelines, LLM reasoning engines).
- Passionate about investment management and quantitative research; actively studying finance, markets, and financial ML.
- Fast learner comfortable adopting new languages and tools (Q/Kdb+, Java, Spark, R).