

Aryan Singh

647-917-2565 | a923sing@uwaterloo.ca | [linkedin.com/in/aryan-singh29](https://www.linkedin.com/in/aryan-singh29) | github.com/aryan29-dev | aryansingh.app

EDUCATION

University of Waterloo

Waterloo, ON

Bachelor of Computing and Financial Management (Co-op)

Sep. 2025 – Apr. 2030

- **Relevant Coursework:** Algorithms & Data Structures, Financial Markets, Data Analytics, Financial Reporting

TECHNICAL SKILLS

Languages: Python, Java, C/C++, JavaScript/TypeScript, SQL (MySQL), HTML/CSS

Frameworks & Technologies: React, Next.js, Tailwind CSS, Node.js, FastAPI

Data & Analytics: pandas, NumPy, NumPy-Financial, Matplotlib, yfinance

Developer Tools & Environments: Git/GitHub, Linux, VS Code, PyCharm, Jupyter Notebook, Eclipse, Anaconda

EXPERIENCE

Food & Beverage Service Associate

Mar. 2023 – Aug. 2025

Canada's Wonderland

Vaughan, ON

- Processed 300+ high-volume financial transactions using **Oracle POS** systems, maintaining **95-99% transaction accuracy** and **strict accountability** during peak operating hours.
- Managed **unit operations** during peak operating periods, coordinating **team operations**, and resolved issues in real time to maintain service continuity.
- Took on a role as a **team lead** by **distributing responsibilities**, prioritizing tasks, and adapting operations in a **fast-paced environment**.

International Service Project – Rwanda Missions Trip

Mar. 2024

Shelter Them Poverty Relief — Brampton Christian School

Kigali, Rwanda

- Collaborated within a **cross-functional team** to plan and execute a **community infrastructure project** under **fixed timelines**, **limited resources**, and logistical constraints.
- Coordinated **resources, materials, and execution** to support the construction of a **functional cow shelter** in partnership with **Shelter Them**.
- Planned and executed **fundraising** and **budget allocation initiatives**, ensuring project completion within **funding** and **resource constraints**.

PROJECTS

Robo-Advising Portfolio Optimizer | *Python, NumPy, pandas, yfinance*

[GitHub](#)

- Developed an end-to-end portfolio construction pipeline that filters equities based on **currency**, **liquidity**, and **market capitalization** constraints and implements **data validation** to remove invalid or delisted tickers and handle **cross-listed stocks** using **pandas** and **NumPy**.
- Calculated **annualized volatility** and removed **high-risk equities** within each sector to control portfolio risk while maintaining diversification.
- Constructed a **\$1,000,000 CAD market-meet portfolio** by selecting stocks with strong correlation to the **S&P 500** and **TSX Composite** and converting weights into shares accounting for **FX rates** and transaction fees.

Baller | *Java, ArrayLists, OOP, Algorithms*

[GitHub](#)

- Developed a **Java-based roster management system** to store and manage player information.
- Implemented **Selection Sort** to organize players alphabetically and **Binary Search** to support efficient name-based lookups.
- Designed a **menu-driven console interface** to support user interaction and input handling.

Portfolio Risk Engine | *Python, NumPy, pandas, yfinance, Matplotlib*

[GitHub](#)

- Built a **Monte Carlo-based portfolio risk engine** in Python to evaluate risk-adjusted returns using historical market data (yfinance API).
- Simulated **5,000 long-only portfolios** with randomized weight vectors and selected the optimal allocation by maximizing the **Sharpe ratio**.
- Implemented core **financial risk metrics**, including annualized return, volatility, **maximum drawdown** (MDD), **Value at Risk (VaR)**, and **Conditional Value at Risk (CVaR)**, and generated portfolio equity curves and risk-return visualizations.

COMPETITIONS & ACHIEVEMENTS

Sir. Isaac Newton Physics Exam (University of Waterloo) — Distinction

2024

Galois Contest (University of Waterloo) — School Champion

2023