

# Aryan Singh

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

## EDUCATION

### University of Waterloo

Bachelor of Computing and Financial Management (Co-op)

Waterloo, ON

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