Aryan Singh

647-917-2565 | a923sing@uwaterloo.ca | linkedin.com/in/aryan-singh29 | github.com/aryan29-dev | aryansingh.app

Education

University of Waterloo — Waterloo, ON

Candidate for Bachelor of Computing and Financial Management (Co-op) — *Expected 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 periods, coordinating **team operations**, and resolved issues in real time to maintain service continuity.
- Embraced the role of 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 under **funding** and **resource constraints**.

Projects

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

- Engineered 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 sector-level 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.

Equity Trend Analyzer | *Python, pandas, NumPy, yfinance, Matplotlib, Streamlit* — GitHub

- Developed an interactive **Streamlit** application to analyze equities using real historical market data (yfinance API) and computes core performance and risk metrics, including **total return**, **annualized volatility**, and **maximum drawdown (MDD)**.
- Implemented **trend detection logic** using log-price **linear regression** to classify equities as uptrend, downtrend, or no clear trend.
- Built **signal analysis** tools, including **moving average crossovers** and **RSI (14)** momentum indicators, along with input validation, dynamic plotting, and **CSV export** to support an investment analysis.

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

- Implemented a **Monte Carlo–based portfolio risk engine** in Python to evaluate risk-adjusted returns using historical market data.
- 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**, **Value at Risk (VaR)**, and **Conditional Value at Risk (CVaR)**, and generated portfolio equity curves and risk–return visualizations.