

Rithik Singh

+1 647-212-8111 | rithik.singh@mail.utoronto.ca | linkedin.com/in/rithik-singh-invests | github.com/rithik279

EDUCATION

University of Toronto - Rotman Commerce

Toronto, ON

Bachelor of Commerce, Management Specialist (Finance focus); Minors in Computer Science and Statistics

Expected Apr. 2029

- GPA: 3.94/4.00; President's Scholar of Excellence (\$10,000); Dean's List Scholar.
- Relevant Coursework: Calculus I-II (MAT135/136), Linear Algebra (MAT223), Data Structures and Algorithms (CSC148), Probability and Statistics (STA237/238).

EXPERIENCE

Summer Analyst, Quantitative & AI Portfolio Management

May 2026 – Aug. 2026

Agilith Capital

Toronto, ON (Remote)

- Rebuilt combination weights for a global commercial six-model equity-ranking system for Canadian equities using non-negative least squares on a walk-forward harness; invalidated an apparent outperformance result after sector neutralization.
- Screened 1,178 factor specifications across eight partitions of schema, frequency, and universe under point-in-time, survivorship, and look-ahead controls; applied two-sided Newey–West HAC t -tests with Benjamini–Hochberg FDR control at $q = 0.10$ within each partition.
- Built a PM-facing ranking and screening tool used by two portfolio managers to score holdings and broader universes with validated factors; conditioned results across 11 macro dimensions using HMM, SOM, and historical regime labels.
- Developed an LLM earnings-research agent tested during Q2 2026 across 30 closely followed companies; structured outputs, deterministic numeric validation, and evaluation gates reduced processing time by approximately 50%.
- Evaluated a 2026 multilingual-embedding alpha methodology for transfer to a new language pair; identified its alignment threshold as corpus-specific rather than universal and recalibrated it.
- Hardened research prototypes into modular, version-controlled workflows and supported database-architecture validation and cloud migration of approximately 480 GB of market and fundamental data (PostgreSQL, Azure SQL).

Quantitative Research Analyst

Mar. 2026 – Present

The Quantitative Finance Club, University of Toronto

Toronto, ON

- Developing an M1/M5/M30 XAUUSD regime-classification framework using volatility clustering, autocorrelation, directional persistence, HMM/clustering methods, and conditional links to equity volatility and interest rates.

Operations Volunteer, Rotman International Trading Competition

Feb. 2026

BMO Finance Research and Trading Lab

Toronto, ON

- Configured trading-lab systems and credentials, ran pre-session checks, and resolved live issues supporting teams from 35 universities.

First-Year Analyst

Oct. 2025 – Apr. 2026

Toronto Student Investment Council

Toronto, ON

- Completed the first-year analyst program through 10+ M&A case analyses and equity investment pitches covering company research, valuation, catalysts, and recommendation defense.

Fund Management Summer Intern

May 2025 – Jul. 2025

Fund Launch

Lehi, Utah (Remote)

- Selected from a pool of 1,000 global applicants; produced a final presentation covering the investment mandate, portfolio construction, operating model, and launch strategy for a new equity fund.

SELECTED PROJECTS

PassPlan - Monte Carlo Prop-Firm Decision Engine | *Python, FastAPI, Next.js* | [GitHub](#)

2026

- Built and deployed a rules-aware engine used by real users to convert TradingView/NinjaTrader histories into 20,000-path payout and failure distributions under trailing-drawdown, daily-loss, consistency, green-day, and withdrawal constraints.
- Added recency-weighted sampling, strategy screening, correlation analysis, and portfolio optimization; validated the engine against realized results from a live prop-firm strategy that generated a successful payout.

RCFA Trading Competition - 4th of 26 Teams | *Python, REST APIs* | [GitHub](#)

2026

- Engineered tender-arbitrage and market-making algorithms using VWAP/liquidity rules, inventory-aware quotes, fee/fine controls, and automated position flattening.

Volatility Forecasting Toolkit | *Python, statsmodels, pytest, CI* | [GitHub](#)

2026

- Compared ARCH, GARCH(1,1), and EWMA on JPMorgan Chase (JPM) daily returns in a reproducible walk-forward backtest; shipped a CLI, configuration, 12 unit tests, CI, and analysis of forecast overshoot and model misspecification.

TECHNICAL SKILLS

Languages: Python, SQL, Java, JavaScript/TypeScript

Quantitative: pandas, NumPy, statsmodels, scikit-learn, factor construction, cross-sectional/time-series backtesting, IC/ICIR, Newey–West HAC inference, BH-FDR, portfolio sorts, turnover and transaction-cost analysis, HMM/SOM regime models

ML/NLP: LLM agents, RAG, sentence embeddings, structured outputs, evaluation harnesses

Data & Engineering: PostgreSQL, Azure SQL, DigitalOcean, Git, pytest, GitHub Actions, REST APIs, FastAPI, Next.js, Docker

AWARDS & ADDITIONAL

Awards & Competitions: Top 3, QuantiFi Algorithmic Trading Competition (24.3% simulated return, 1.78 Sharpe, over 252 trading days); 3rd of 2,200 internationally, DECA ICDC Accounting Applications; 6th of 1,100 nationally, Waterloo Financial Literacy Competition; selected from 1,500 applicants for the inaugural Waterloo Trading Competition (2026).

Certifications: Bloomberg Market Concepts (BMC); Python for Quantitative Finance, Quant Finance Institute (QFI).

Interests: Competitive cricket (200+ matches; 3,000+ career runs), golf, tennis, and travel.