Samuel Joffe

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EDUCATION

UCLA ANDERSON SCHOOL OF MANAGEMENT Los Angeles, CA
Master of Financial Engineering GRE: 330/340 Expected December 2027

QUEEN'S UNIVERSITY Kingston, ON, Canada
Bachelor of Applied Science, Applied Mathematics and Computer Engineering GPA: 3.52 June 2026

- *Awards:* Principal's Scholarship (Top 3% entering class), First Class Honors
- *Relevant Courses:* Stochastic Processes (A+), Probability (A+), Real Analysis II (A), Algorithms (A-), Statistical Learning (A-)

SKILLS

- *Technical Skills:* Python, C++, SQL, MATLAB, Git; NumPy, pandas, scikit-learn

EXPERIENCE

SPIN MASTER Toronto, ON, Canada
Software Engineering Intern May – Aug 2025

- Developed real-time embedded C programs to control GPIO pins for accurate stepper motor actuation on resource-constrained microcontrollers, achieving approximately 0.45 degrees of rotation per step with reliable, repeatable positioning.
- Designed and tested a frequency-domain audio processing algorithm for pitch shifting using windowing, overlap-add, and Fourier transforms, optimized for fixed-point arithmetic, achieving pitch shifts from 250 Hz down to 80 Hz.

BANK BROTHERS SUSTAINABLE INGREDIENTS Toronto, ON, Canada
Financial Analyst June – Aug 2024

- Maintained and refined the company's internal cash flow projections by gathering, verifying, and analyzing financial data.
- Revised and optimized product costing sheets for three product lines by reconciling direct and indirect expenses, improving the accuracy of unit cost and margin estimates used in profitability analysis.

PRIVATE TUTOR Sept 2023 – Apr 2026

- Tutored engineering students in calculus, physics, linear algebra, computer science, differential equations, and real analysis.

PROJECTS

Optimizing Bidding Strategies for Power Assets (Queen's Engineering Capstone) Sept 2025 – Apr 2026

- Formulated day-ahead electricity market bidding as a finite Markov decision process in a 4-member capstone team, optimizing generator price and quantity offers under demand, fuel-cost, and competitor uncertainty.
- Implemented a Q-learning bidding agent and benchmarked learned policies against cost-plus-markup and historical-quantile strategies.
- Built a multi-agent market simulator with heterogeneous competitors, risk constraints, and market-clearing mechanics; achieved 29.2% and 79.2% outperformance over the strongest benchmark in single- and five-agent settings.

Earnings-Call Sentiment Divergence vs. Post-Earnings Stock Returns (NLP) May – July 2026

- Built and validated an NLP research pipeline testing whether earnings-call sentiment divergence (FinBERT) predicts post-earnings stock returns across 8 S&P 500 companies; found no statistically robust relationship after event-study analysis (quintile sorts, monotonicity checks, outlier-robustness testing), a null result consistent with efficient near-term pricing of call sentiment.
- Engineered the transcript-to-signal pipeline and market-adjusted return construction in Python (pandas, transformers), covering FinBERT sentiment scoring, abnormal-return computation, and multi-window event studies.

NYC Taxi Fare Prediction March – April 2026

- Engineered 20+ features from raw trip data — Haversine and Manhattan-path distances, airport-proximity flags, and datetime decomposition — inside a leakage-safe pipeline with in-fold imputation and scaling.
- Stacked seven base learners (Ridge, Random Forest, Extra Trees, Histogram Gradient Boosting) via 5-fold out-of-fold cross-validation, benchmarking linear and boosted meta-models against simple averaging; best submission achieved 3.63 RMSE on Kaggle's public leaderboard.

Rental Listing Interest-Level Classification March – April 2026

- Cleaned and engineered features (price-per-bedroom, amenity lift scores, geographic density) from 8,500+ NYC rental listings to classify interest level (low/medium/high).
- Built a two-level stacking ensemble (Random Forest + XGBoost, logistic-regression meta-learner) on 5-fold out-of-fold predictions, improving Kaggle public log loss from 0.960 (logistic-regression baseline) to 0.796.

ADDITIONAL INFORMATION

- *Interests:* Hockey (High School Varsity Captain), Chess (2050 Rapid Rating), Investing, Tennis, Golf