Oveys Sayad

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Research Interests

I am currently exploring research directions at the intersection of quantitative finance, machine learning, and economics, and am in the process of identifying a focused thesis topic. My interests include financial machine learning, market microstructure, quantitative finance, artificial intelligence for finance, financial econometrics, deep learning, reinforcement learning, time series modeling, and asset pricing.

Education

Master of Business Administration (MBA), Finance 2024 – Present | Tehran, Iran
University of Tehran
GPA: 19.42/20

- **Relevant Coursework:** Financial Econometrics, Financial Engineering, Corporate Finance and Investment, Investment Strategies and Portfolio Management, Business Economics, Strategic Management
- **Research Preparation:** Audited graduate-level course in **Machine Learning** (Prof. Ali Sharifi-Zarchi); audited graduate-level course in **Reinforcement Learning** (Prof. Mohammad Hossein Rohban)
- **Current Status:** Thesis topic not yet selected

B.Sc. in Electrical Engineering (Control Systems) 2019 – 2024 | Tehran, Iran
Sharif University of Technology
GPA: 17.25/20

- **Minor in Economics:** Official 33-credit Economics Minor; Minor GPA: 19.8/20
- **Bachelor Thesis:** *Health versus Wealth: Economic and Epidemiological Modeling of COVID-19 Mitigation Policies*
  - Interdisciplinary project combining economics and engineering perspectives on pandemic policy design
  - Developed dynamic macroeconomic and epidemiological models to evaluate COVID-19 mitigation policies
  - Analyzed trade-offs between public health outcomes and economic activity under alternative policy scenarios
- **Relevant Coursework:** Signals and Systems, Linear Control Systems, Modern Control, Digital Control, Operations Research, Probability and Statistics, Engineering Mathematics, Differential Equations, Object-Oriented Programming, Econometrics, Microeconomics, Macroeconomics, Financial Economics

Diploma in Mathematics and Physics 2015 – 2018 | Tehran, Iran
National Organization for Development of Exceptional Talents (NODET / SAMPAD) High School

- Diploma GPA: 19.77/20
- Graduated among the top students of a selective gifted-education high school program

Awards and Honors

49th Nationwide Rank 2019
Iranian National University Entrance Examination (Mathematics & Physics)

53rd Nationwide Rank 2024
Iranian National MBA Entrance Examination

34th Nationwide Rank 2025
Iranian National MBA Entrance Examination
Did not participate in program selection

Kharazmi Student Competition Award

NODET / SAMPAD Gifted Education Graduate
National Organization for Development of Exceptional Talents (SAMPAD)

Technical Skills

Programming Languages

Languages: Python, MATLAB, Java, C

Machine Learning & AI

Machine Learning & AI: scikit-learn, PyTorch, TensorFlow, Deep Learning, Machine Learning, Reinforcement Learning, Neural Networks, Time-Series Modeling

Data Science & Quantitative Analysis

Data Science: pandas, NumPy, matplotlib, Statistical Modeling, Econometrics, Optimization, Operations Research

Finance & Quantitative Tools

Finance: Financial Econometrics, Portfolio Analysis, Asset Pricing, Financial Engineering, Risk Analysis

Software & Infrastructure

Software: Git, GitHub, Jupyter Notebook, VS Code, LaTeX, PowerBI, Excel, Figma, Jira

Languages

Persian: Native

English: Upper-Intermediate to Advanced (B2/C1)

Selected Coursework

Graduate: Financial Econometrics, Financial Engineering, Corporate Finance and Investment, Investment Strategies and Portfolio Management, Business Economics, Strategic Management.

Undergraduate: Signals and Systems, Linear Control Systems, Modern Control, Digital Control, Operations Research, Probability and Statistics, Engineering Mathematics, Differential Equations, Object-Oriented Programming, Econometrics, Microeconomics, Macroeconomics, Financial Economics.

Industry Experience

Executive Associate to the CEO | Head of Business Development | Tehran, Iran
Iranian Technology Development Fund
Topics: Financial Engineering, Derivatives, Quantitative Analysis, Algorithmic Trading

- Advised the CEO on corporate strategy and executive investment decisions, contributing quantitative and financial analysis to high-stakes deliberations.
- Founded and led the Business Development department, establishing processes for product design, market evaluation, and cross-functional delivery.
- Designed investment products and financial services, including novel instruments evaluated through the Investment Committee.
- Evaluated investment opportunities and strategic financial decisions as a participating member of the Investment Committee.
- Developed derivative-market products and a platform for managing option strategies (Covered Call, Protective Put, Bull/Bear Spreads, Collar, and related structures).
- Built quantitative tools for derivatives arbitrage, financial modeling, and market analysis using Python and large-scale financial datasets.

- Constructed data-driven decision frameworks supporting strategic transformation initiatives across engineering, finance, and operations teams.
- Applied methods from quantitative finance, market microstructure, order-book analysis, and algorithmic trading to equity, derivatives, and cryptocurrency markets.
- Designed a multi-exchange Level-2 order-book and trade-data pipeline (Nobitex, Wallex, Bitpin, Ramzinex) to evaluate cross-exchange crypto arbitrage under realistic transaction costs; see Selected Research & Technical Projects for details.

Product Manager | Tehran, Iran

Capital Hermes

Topics: FinTech, Product Analytics, Investment Platforms

- Led end-to-end development of a real estate crowdfunding platform, from product strategy and roadmap through MVP launch.
- Defined investment workflows and product analytics to support scalable, data-informed investor and developer experiences.
- Directed cross-functional teams spanning engineering, legal, and marketing, aligning user research with regulatory and business constraints.

Business Development Specialist | Tehran, Iran

Capital Hermes

Topics: Venture Capital, Market Research

- Analyzed investment opportunities and venture capital prospects through structured market and financial research.
- Developed strategic partnerships that expanded the firm's deal flow and market presence.

Selected Research & Technical Projects

Cross-Exchange Cryptocurrency Arbitrage Analysis

Topics: Market Microstructure, Algorithmic Trading, Financial Data Engineering

- Constructed a quantitative pipeline to collect and process high-frequency Level-2 order-book, trade, price, and market-depth data from Nobitex, Wallex, Bitpin, and Ramzinex.
- Built a scalable financial market database and an analytical framework to detect cross-exchange arbitrage opportunities under realistic frictions.
- Estimated executable profitability after trading, deposit, and withdrawal fees, transfer delays, and slippage, assessing whether apparent inefficiencies survived transaction costs.
- Produced statistical analyses and interactive visualizations characterizing cross-market inefficiencies in cryptocurrency microstructure.
- Technologies: *Python*, *pandas*, *NumPy*, *matplotlib*, *Financial Data Engineering*.

Put–Call Parity Arbitrage Detection in the Iranian Options Market

Topics: Options Pricing, Derivatives, Market Microstructure, Quantitative Finance

- Developed an empirical detection system for put–call parity violations in Iranian equity options using historical order-book snapshots.
- Matched call–put pairs and computed parity residuals, synthetic prices, and cost-adjusted expected profits under commissions and slippage.
- Applied liquidity and Level-1 executability filters to distinguish economically attainable arbitrage from illiquid false signals.
- Conducted statistical and cluster analyses of residual distributions, profit percentages, and opportunity rates by underlying, strike, and expiry.
- Designed the pipeline as a research laboratory for executability-adjusted no-arbitrage testing and option-market microstructure analysis.

- Technologies: *Python*, *pandas*, *NumPy*, *SciPy*, *matplotlib*, *plotly*.

GitHub

Explainable Machine Learning for BTCIRT Limit Order Book Dynamics

Topics: Market Microstructure, Machine Learning, Explainable AI, Financial Data Science

- Designed a multi-study framework for mid-price dynamics on Nobitex BTCIRT under sparse limit-order-book snapshots, separating next-observation, next-change, and strict-horizon prediction tasks.
- Engineered stationary LOB features with temporal validation, actual-delay tracking, and target-timestamp purging to control label leakage in irregular high-frequency data.
- Trained and evaluated gradient-boosting models (XGBoost, CatBoost) against strong baselines, quantifying incremental predictive value of LOB state over price-only features.
- Applied an explainability triad—SHAP, permutation importance, and ablation—to interpret drivers of predicted mid-price movements.
- Technologies: *Python*, *XGBoost*, *CatBoost*, *SHAP*, *scikit-learn*, *pandas*, *NumPy*.

GitHub

Teaching Experience

Teaching Assistant | Sharif University of Technology

Venture Investing (Graduate Course) — Instructor: Dr. Farrahi

- Mentored graduate students on startup valuation, venture capital contracting, and quantitative deal analysis.
- Designed instructional materials on shareholder agreements, ESOP structures, revenue models, and startup KPIs linking financial theory to applied VC decisions.
- Guided students through VC deal evaluation during office hours, emphasizing analytical rigor and clear financial communication.

Teaching Assistant | Sharif University of Technology

Finance for Startups — Instructor: Dr. Haghpanah

- Mentored students on startup valuation, capital budgeting, and financial decision-making for early-stage ventures.
- Developed educational materials covering startup financing, exit strategies, and business planning with a quantitative finance emphasis.
- Supported assignment development and held office hours that strengthened students' ability to communicate financial analysis clearly.