MAYSAM KHODAYARI G.

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Personal Website

EDUCATION

CARNEGIE MELLON UNIVERSITY, TEPPER SCHOOL OF BUSINESS Pittsburgh, PA

Master of Science in Computational Finance – Financial Mathematics 12/2023

- **Coursework:** *Stochastic Calculus, Optimization, Statistics/Machine Learning, Options, Fixed-income, Time Series, and Advanced Programming in Python, C++, SAS, SQL*

UNIVERSITY OF TEHRAN Tehran, Iran

Master of Business Administration in Operations Management 08/2015

- **Coursework:** Accounting, Financial Reporting Analysis, Investment Management, Strategic Management

UNIVERSITY OF TABRIZ Tabriz, Iran

Bachelor of Science in Industrial Engineering – Technology Engineering 09/2010

PUBLICATIONS

- Quantitative Investment Diversification Strategies via Various Risk Models, 2024, Journal of Advancements in Applied Business Research
- Constructing an Investment Fund through Stock Clustering and Integer Programing, 2024, Journal of Advancements in Applied Business Research
- Application of Deep Learning for Factor Timing in Asset Management, 2024, Journal of Strategic and International Studies
- Comparison of Several Machine Learning Methods in Credit Card Default Classification, 2024, Journal of Strategic and International Studies
- Machine Learning Methods for Crypto Level II Data Prediction in Algorithmic Trading, 2024, Journal of Strategic and International Studies
- Integrated fuzzy mathematics analytical network process for prioritization of new technology-based firms, 2019, International Journal of Industrial and Systems Engineering

EXPERIENCE

Citigroup Florida, US

Quantitative Researcher and Model Developer 3/2024 – Present

- **Research:** Did quantitative research to develop updated credit and market risk models yielding in decreased Citi's portfolios risk
- **Programming:** Developed risk models using Python for a variety of Citi's portfolio in US and around globe
- **Statistical Test:** Implemented back-tests and stress tests on Citi's wholesale credit risk models for performance monitoring

Citigroup New York, US

Quantitative Risk Management Intern 6/2023 – 8/2023

- **Credit Risk Analytics:** Defined 390+ critical features to control credit risk of mortgage and card portfolios in Europe and Asia
- **User Acceptance Testing:** Set 550+ data quality rules for wealth management products to support data transformation
- **Statistical Analysis:** Coded statistical tests in Python, SAS, and SQL for 1.5 billion accounts in Europe, Asia, and Mexico

Etebar Asset Management Tehran, Iran

Quantitative Investment Officer 3/2018 – 7/2022

- **Investment Management:** Performed investor risk appetite evaluation, fundamental analysis, and NAV estimation of bonds and equities to build risk-relevant portfolios for individual and institutional investors
- **Product Development and Regulation:** Designed and established two mutual funds and an ETF for pooling retail funds through cross-functional operations including preparing and presenting investment methodology, sales and trades process with brokers, performing attribution analysis, and monthly fund reviews
- **Capital Fund Raising:** Completed fund-raising presentations and negotiations to family offices, pension funds, and High-Net-Worth Individuals resulting in raising $30 Million asset under management
- **Teaching Fund Operations:** Taught fund accounting principles and daily NAV estimation to a group of software engineers and data analysts, MBA, accounting, and finance new hires to develop trading platform for fixed-income mutual fund

Tamadon Asset Management Tehran, Iran

Associate of Investment Funds 3/2015 – 2/2018

- **Multi-manager Investment:** Designed a regulated fund of funds enabling asset management companies to aggregate funds to invest in private and public markets through one single investment vehicle

- **Venture Capital Fund:** Executed investment pitches, due diligence, writing NDA and SHA documents and valuation reports for SMEs in health care, FinTech, food, polymer, and transportation

Arman Sharif Consulting Tehran, Iran
Senior Analyst 3/2013 – 2/2015

- **Auditing:** Generated innovative due diligence reporting system for 64 Small and medium-sized enterprises and mezzanine firms operating in polymer, health care, pharmacy, food, AI, transportation, steel, electricity, and telecommunication
- **Valuation analyst:** Completed capital market accounting and merger and acquisition rotations and prepared my first valuation report for Snap application, the local version of Uber
- **Leadership:** Led teams of experts in engineering and finance to accomplish due diligence using Porter's five forces model

PROJECTS

- **Multi-factor Portfolio Optimization:** Built PCA and cross-sectional risk models, generated, tested sharp ratio, and combined alpha factors including momentum, mean reversion, and overnight sentiment to estimate regularized weights of 490 US stocks
- **Index-Tracking ETF:** Designed, optimized and rebalanced passive ETF to track S&P500 index yielding in tracking error 0.05
- **Interest Rate Evolution Process:** Priced zero-coupon bond through simulating Cox–Ingersoll–Ross interest rate model with Euler, Milstein, and midpoint discretization schemes and leveraging Lamperti transformation and Richardson extrapolation
- **Machine Learning Capstone:** Building a market-neutral portfolio through developing an ensemble of neural network, LGBM, and random forest to beat the target portfolio created by three benchmark models in a global US-based hedge-fund