VAHAGN KIRAKOSYAN

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Education

Columbia University New York, NY

Master of Arts, Mathematics of Finance *September 2015 – May 2016*

- *Relevant Coursework:* Stochastic Processes and Applications, Statistical Inference and Time-Series Modelling, Introduction to the Mathematics of Finance, Hedge Funds Strategies & Risk, Capital Markets and Investment, Stochastic Methods In Finance, Numerical Methods In Finance, Mathematical Methods in Financial Price Analysis, Data Mining

Yerevan State University Yerevan, Armenia

Master of Science, Mathematics (GPA:* 19.36 / 20, top 5%*) *September 2013 – May 2015*

- *Relevant Coursework:* Game Theory, Investment Portfolio Management, Operations Research, Spline Theory

Bachelor of Science, Mathematics (GPA:* 18.31 / 20, top 10%*) *September 2009 – May 2013*

- *Relevant Coursework:* Probability Theory, Statistics, Linear Algebra, Analytic and Differential Geometry, Mathematical Analysis, Differential Equations, Mathematical Logic, Real Analysis, Complex Analysis, Functional Analysis

Project Experience

Trading Strategy based on 26 characteristics of a company Independent

- Implementing a strategy based on research paper by N. Light, D. Maslov, O. Rytchkov "Aggregation of Information About the Cross Section of Stock Returns: A Latent Variable Approach".
- Collecting firm specific data from CRSP and Compustat Databases.
- Constructing an aggregate variable based on 26 specific characteristics of a firm.
- Using Python to simulate long-short strategy on top-bottom decile portfolios based on the aggregate variable.

Momentum Strategy on SPY Columbia University

- Implemented momentum strategy using Python.
- Simulated the strategy on SPY for 2005-2015 period.
- Compared the results of the strategies for different Moving Average periods.

Trading Strategy based on Insider silence Columbia University

- Implemented a strategy based on research paper by George P. Gao and Qingzhong Ma "The Sound of Silence: What Do We Know When Insiders Do Not Trade?".
- Used Python to create the main trading signal and back test the strategy.

Near-Nash equilibrium strategies in antagonistic games Yerevan State University

- Studied antagonistic games where the strategies of the players are distribution functions.
- Created a software program which finds epsilon-equilibrium strategies for given epsilon.

Professional Experience

Columbia University New York, NY

Teaching Assistant for "Introduction to the Mathematics of Finance" course *January 2016 – May 2016*

- Holding office hours and grading homework assignments.
- Course Syllabus: Stochastic processes, Derivative pricing, Monte Carlo simulation using Matlab and Excel/VBA.

Naghashyan Solutions LLC Yerevan, Armenia

Back-end web developer *June 2012 – June 2015*

- Implemented website functionality part using programming languages such as PHP, MySQL, Javascript, NodeJs.
- Optimized MySQL queries and implemented caching mechanism, making the website run 4 times faster.
- Portfolio: http://imusic.am, http://www.arzttermine.de, https://globbing.com/

Awards

- International Mathematical Olympiad 2009, Bremen, Germany (Bronze medal)
- 5th International Zhautykov Olympiad, Mathematics, Almaty, Kazakhstan (Silver medal)
- The ACM-ICPC International Collegiate Programming Contest 2011, Tbilisi, Georgia (Second Degree)

Skills

Programming skills: R, Matlab, C++, Python, Excel/VBA, MySQL, SQL, Unix/Linux, PHP, Javascript, Node.js, OOP

Languages: Russian (fluent), Armenian (native)