

Peter M. Tian

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Education

PRINCETON UNIVERSITY

Ph.D. Student in Operations Research and Financial Engineering; GPA: 3.96/4.0

Princeton, NJ
May 2023 (Expected)

Research Areas: Statistical Learning, High Dimensional Statistics, Reinforcement Learning

Honors and Awards: Gordon Wu Fellowship

Relevant Coursework: Deep Learning, Reinforcement Learning, Statistical Learning, Stochastic Calculus, Convex and Conic/Linear and Nonlinear Optimization, Stat Analysis of Financial Data, Probability

HARVARD UNIVERSITY

BA in Mathematics; GPA: 3.94/4.0, GRE: 166V, 170Q, 5.0W, Math Sub 960 (99th percentile)

Cambridge, MA
May 2019

Honors and Awards: Magna Cum Laude, John Harvard Scholar, The Detur Book Prize

Leadership and Activities: Harvard Financial Analysts Club (Quantitative Research), Harvard Poker Club (Treasurer)

Relevant Coursework: Math 55A&B, Real/Complex Analysis, Probability, Generalized Linear Models, ML, Algorithms

THE WELLINGTON SCHOOL

GPA: 4.0/4.0, SAT: Reading 800, Math 770, Writing 800

Columbus, OH
June 2015

Honors and Awards: Siemens Competition Individual Grand Prize (\$100,000 scholarship)(2014), Davidson Fellow (\$25,000 scholarship)(2015), Research Science Institute Scholar (2014), Mathematical Olympiad Summer Program Attendee (2013), Four-time USAMO qualifier (2012-2015)

Relevant Experience

Five Rings Capital, LLC

Quantitative Trading Intern

New York, NY
June 2020-August 2020

Worked on a research project on high frequency mean reversion strategies. Found several significant mean reversion strategies for liquid contracts based on pairwise correlation structure and box spreads. Came up with a price model for illiquid contracts based on interpolation with liquid contracts and found significant mean reversion based on this model. Also participated in mock trading sessions and placed first in summer-long algorithmic mining game competition.

AQR Capital Management

Research Summer Analyst

Greenwich, CT
June 2018-August 2018

Worked on a research project studying intraday momentum signals. Showed momentum signals based on morning returns added significant alpha to base momentum signals. Also found increased alpha using trading and news volume to weight intraday momentum signals. Corrected a key tool for factor creation in infrastructure code.

Geode Capital Management, LLC

Quantitative Research Intern

Boston, MA
June 2017-August 2017

Worked on a research project showing that significant active changes in the textual content of company quarterly reports are associated with lower future stock returns. Generated stock selection signals using web-scraping and natural language processing techniques in R. Constructed a portfolio long "non-changers" and short "big-changers" with significant alpha.

Research Publications

- J. Klusowski, P. Tian. **Nonparametric Variable Selection with Optimal Decision Stumps** (Preprint, 2020)
- P. Tian, H. Gong, C. Ni, M. Wang. **Near optimal regret in average-reward Markov decision processes with linear function approximation** (Preprint, 2020)
- J. Geneson, P. Tian. **Extremal functions of forbidden multidimensional matrices** (Discrete Mathematics, 2017)

See others at https://scholar.google.com/citations?user=5x_kljAAAAAJ&hl=en&oi=ao

Skills & Interests

Programming: Python, R, Java, C, C++, SQL, Matlab, OCaml

Language: Chinese (professional working proficiency)

Interests: Poker, Cross country running, Basketball, Ping-pong, Movies