Mukund Maheshwari

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EDUCATION

University of Chicago **Chicago, Illinois, USA**
Master of Science, Financial Mathematics **Expected December 2024**

Indian Institute of Technology (IIT) Kanpur **Kanpur, India**
Bachelor of Science, Mathematics and Scientific Computing **July 2016 – May 2020**

PROFESSIONAL EXPERIENCE

Bank of America **New York City, New York**
Summer Associate, Quantitative Strategies and Data Group **June 2024 – Aug 2024**

- Predicted one day follow-on price change employing a convolutional neural network combined with transformer to build a forecasting model. Developed customized loss functions to effectively handle data variability
- Implemented LASSO, Boosting and Bagging methods for robust feature selection using recursive elimination
- Benchmarked forecasting performance against baseline models like XG Boost, Random Forest and Naïve forecast

Goldman Sachs, External Investing Group (XIG/AIMS), AWM **Bengaluru, India**
Associate, Strat (Promoted from Analyst) **Jan 2023 – July 2023**

- Innovated metrics for quantifying hedge fund portfolio's performance relative to benchmark and peers, deriving and formulating numerical methods to differentiate between asset allocation and fund selection
- Enhanced portfolio construction methodology for offshore hedge fund portfolios by modelling the liquidity framework and increasing accuracy of tools and reports by 90% for client lending and reporting

Analyst, Strat **June 2020 – Jan 2023**

- Developed a proactive notification system for identifying exceptional over/under performance of hedge funds based on drawdowns, tracking error and information ratios to report deviations from expected performance levels
- Pioneered the migration of the hedge fund business's portfolio performance dashboard to a new in-house web-based infrastructure. Revamped the data sourcing pipeline to fetch updated returns from multiple sources such as HFR, enabling real-time monitoring and timely decision-making by investment and client teams
- Received Pre-Placement Offer from campus for exceptional performance, re-joined the same team upon graduation

RESEARCH EXPERIENCE

Mizuho Securities **Chicago, Illinois**
Quantitative Researcher, University of Chicago Project Lab **Mar 2024 – May 2024**

- Explored Generative AI models to create synthetic data for evaluation of CDS using cross sectional regression
- Adopted CTGAN as the optimal model, leveraging Shapiro-Wilk, KS, and Chi-Square tests to confirm data similarity

Graduate Course Project **Chicago, Illinois**
Time Series Analysis **Mar 2024 – May 2024**

- Forecasted exchange rates using exogenous market volatility measures. Selected Vector Autoregressive Model over ARIMAX and Prophet, achieving 12% MAPE and 0.01 RMSE in 12-month walk-forward validation

Graduate Course Project **Chicago, Illinois**
Quantitative Trading Strategy **Jan 2024 – March 2024**

- Utilized unsupervised learning (K-Means and DBSCAN) to identify company pairs based on fundamental ratios and momentum. Back tested mean reversion strategy on cluster matched companies with statistical arbitrage opportunity
- Analyzed performance across various market regimes, validating role as a robust diversification strategy

Summer Research **Kanpur, India**
Indian Institute of Technology, Kanpur **May 2018 – July 2018**

- Co-Authored research publication on dual optimization of loss and data latency for a relay node selection in a IoT Network, presented in 24th Annual International Conference on Mobile Computing and Networking – Mobicom'18

SKILLS

- **Certification:** CFA Level I, Undergraduate Minors in Computer Systems and Industrial & Management Engineering
- **Languages and Tools:** C, Python, R, SQL, Slang, MATLAB, Tableau, TypeScript, Angular, Git, Jira, MS Office
- **Interests:** Table Tennis, Running, Singing, Cooking, Entrepreneurship, Geopolitical and Macroeconomic Affairs'