SAMAR HOLKAR

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EDUCATION

Expected 12/23 **NEW YORK UNIVERSITY** New York, NY
The Courant Institute of Mathematical Sciences
M.S. in Mathematics in Finance

- ***Coursework:*** mean-variance optimization, Black-Scholes pricing, optimal execution, machine learning, linear regression, equity derivatives hedging, time series analysis, option greeks, securitized derivatives

08/13 - 05/17 **INDIAN INSTITUTE OF TECHNOLOGY ROORKEE** Roorkee, India
B.Tech. in Computer Science and Engineering (awarded 09/17)

- ***Coursework:*** probability (basics), data structures, algorithms, deep learning

EXPERIENCE

08/23 - Present **WOLFE RESEARCH, LLC** New York, NY
Quantitative Research Intern - QES Research (Python)

- Conducted stock selection based on impact analysis of trademark protection on profits, creditworthiness, and insights from USPTO Trademark Assignment dataset

06/23 - 08/23 **U.S. BANK** New York, NY
Quantitative Modeling Intern - Derivatives Portfolio Management Risk (Python)

- Analyzed energy portfolios under distressed market scenarios like Greek Debt Crisis and Asian Crisis

04/19 - 06/22 **GOLDMAN SACHS** Bangalore, India
Associate - Equity Derivatives

- Built initial margin model for U.S. equity derivatives flow portfolio, reducing funding costs by $3 million
- Optimized market risk on single stock options using equity and volatility based risk factors to offer clients optimal margins on prime brokerage portfolios
- Adapted prime brokerage margin model for single stock equity derivatives franchise trading business to derive credit risk benchmarks for U.S. clients
- Structured corporate trade models to optimize collateral and margin constraints for clients
- Collaborated with trading desk to analyze funding costs and risks for high notional trades

06/17 - 03/19 **PAYTM**
(FinTech startup) New Delhi, India
Software Engineer

- Created scalable rule-based engine standardizing financial products; streamlined operational design, while cutting costs and enhancing user experience through interactive design flow

PROJECTS

09/22 - Present **NEW YORK UNIVERSITY** New York, NY
Quantitative Research Projects, The Courant Institute of Mathematical Sciences (Python)

- Implemented strategy to trade multi-asset ETF baskets by generating sparse mean-reverting portfolios using Box-Tiao canonical decomposition
- Priced equity rate hybrid security; structured payoffs marking LIBOR and Nikkei-225; used Raw-SVI to simulate arbitrage free volatility surface
- Built impact model to measure implicit trading costs based on Almgren, et al. (2005), using NYSE Trades and Quotes (TAQ) dataset on S&P 500 stocks

08/16 - 02/17 **INDIAN INSTITUTE OF TECHNOLOGY ROORKEE** Roorkee, India
Text-Image Synthesis with Uni-Skip Vectors (Python, Deep Learning)

- Designed text-to-image learning model using text data with 1M-word vocabulary, producing high-level representations with distributed text encoder conditioned on GANs

COMPUTATIONAL SKILLS / OTHER

Programming Languages: Python, C/C++, Javascript, Slang