

SAMAR HOLKAR

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EDUCATION

Expected 12/23	NEW YORK UNIVERSITY The Courant Institute of Mathematical Sciences M.S. in Mathematics in Finance	New York, NY
08/13 - 05/17	INDIAN INSTITUTE OF TECHNOLOGY ROORKEE B.Tech. in Computer Science and Engineering (awarded 09/17)	Roorkee, India

- **Expected Coursework:** object oriented programming in finance, portfolio optimization, derivatives pricing, econometrics, machine learning
- **Coursework:** probability (basics), linear algebra, machine learning, multi-variable calculus and differential equations
- **Honors/Awards:** MCM (Merit-Cum-Means) Scholarship for Exemplary Performance (99.9 percentile) in All India IIT Joint Entrance Examination

EXPERIENCE

04/19 - 06/22	GOLDMAN SACHS Associate - Quantitative Strategist	Bangalore, India
06/17 - 04/19	PAYTM (E-commerce and utility startup)	New Delhi, India

- Modeled initial margin for U.S. equity derivatives flow desk's portfolio, resulting in 14% reduction in overall margin postings
- Calibrated 5-day 99.7% GAP risk calculation for option hedges to offer clients optimal margins on their portfolios
- Calculated credit risk benchmarks for U.S. equity derivatives clients trading single stock portfolios using different strategies
- Structured corporate trade models to optimize collateral and margin constraints for clients
- Optimized CVA capital risk for clients, resulting in reduction in attributed equity (capital constraint) by about 4%

Software Engineer

- Built language translation engine that accommodated 11 languages, enhancing user experience through interactive design flow
- Created rule-based engine that standardized product names, streamlining operational design, as well as cutting expenses and time-intensive manual operations

PROJECTS

08/16 - 02/17	INDIAN INSTITUTE OF TECHNOLOGY ROORKEE Text-Image Synthesis with Uni-Skip Vectors (Python, Deep Learning)	Roorkee, India
04/16 - 05/16	INDIAN INSTITUTE OF TECHNOLOGY ROORKEE Object Identification from Visual Data (Python)	Roorkee, India

- Used natural language understanding; designed model that learned image generation from text data with 1M-word vocabulary, producing high-level generic sentence representations
- Improved model by employing distributed text encoder conditioned with generative adversarial modeling to produce visual representations

- Followed hypothesis to optimize hyperparameters such as receptive fields and feature maps to improve invariance and filtering in convolutional neural net architecture

COMPUTATIONAL SKILLS / OTHER

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

Languages: English (fluent), Hindi (native)

Certifications (Coursera): [Financial Markets](#), [Introduction of Financial Engineering and Risk Management](#)

Statistics with Python, [Numerical Methods](#)

Interests: Programming (ranked top-4th percentile in ACM ICPC), Public Speaking (President of GS Toastmasters)