

GREGORY (GREG) SHARMA

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EDUCATION

- Expected 12/25 **NEW YORK UNIVERSITY** New York, NY
The Courant Institute of Mathematical Sciences
M.S. in Mathematics in Finance
- *Expected Coursework:* machine learning, model selection, Lasso, ridge, and elastic net regressions, PCA, SVD, risk models, stochastic processes, SDEs, PDEs
- 09/20 - 05/24 **NEW YORK UNIVERSITY** New York, NY
The Leonard N. Stern School of Business
B.S. in Business and Political Economy, Minor in French
- *Coursework:* time series forecasting, equity factor models, political economics, international economics, corporate finance, debt instruments
 - *Awards:* 2023 William Lowell Putnam Mathematical Competition (scored 20; top 20%)

EXPERIENCE

- 05/23 - 08/23 **TRANSMARKET GROUP LLC** Chicago, IL
(Privately held global markets proprietary trading firm)
Quantitative Trading Intern (Python, SQL, Excel)
- Collaborated with relative value market making strategy on off-the-run Treasury desk, focusing on long-end sector (20- and 30-year on-the-runs, ZB and UB CTDs)
 - Introduced novel duration spacing measure for improved yield curve risk management, smoothing spline fits through noisy coupon premia and anomalies between liquidity points
 - Wrote Python script that calculated yields' daily settle for residual cheapness and richness, generating daily reports
 - Created Excel trading sheet to manage off-the-run positions with live swap spread quotes
 - Used historical regression models and various hedges to identify undervalued and overvalued off-the-runs
 - Predicted auction yields of new on-the-run Treasuries using new 2-variable method

PROJECTS

- 04/24 - 05/24 **NEW YORK UNIVERSITY** New York, NY
Effect of Presidential Election on S&P 500 Volatility and Equity Returns (Python, MATLAB)
- Reconstructed 2020 U.S. presidential election win probability using PCA on equity returns
 - Found electoral data to be statistically significant as exogenous variable in predicting next-day realized variance in S&P 500
- 05/21 - 05/23 **Dynamic Asset Pricing Research**
- Collaborated with team on volatility research, overseen by Math Finance professor; developed volatility and options valuation model for exotic assets (crypto, VX, commodity futures)
 - Contributed to weekly quant workshop meetings, integrating topics including generalized linear models, hidden Markov models with multivariate emissions, and random forest trees

COMPUTATIONAL SKILLS / OTHER

Programming Languages: Python (Pandas, PyTorch, TensorFlow, scikit-learn, HuggingFace), SQL, R, C++, MATLAB

Languages: English (native), French (fluent)

Interests: Transaction-based volatility measures, natural language processing of financial news (text classification)