

ANIRUDH KROVI

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EDUCATION

NEW YORK UNIVERSITY, Leonard N. Stern School of Business

New York, NY

Master of Business Administration (Specializations: Business Analytics (AI/ML) and Strategy)

May 2023

- Recipient, Prof. Robert Salomon Faculty Scholarship (full-tuition, merit-based); GMAT: 770 (99th percentile)

NORTHWESTERN UNIVERSITY

Evanston, IL

Doctor of Philosophy (PhD), Theoretical Physics

March 2021

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

Kerala, India

Bachelor of Technology in Engineering Physics

May 2014

EXPERIENCE

INDEPENDENT AI/ML-BASED SIGNAL RESEARCH

Chicago, IL

All working papers, results and additional projects: <https://anirudhkvs.github.io/anirudh-fullsite/>

2025 - Present

- U.S. Equities Statistical Arbitrage – Designed sector-neutral mean-reversion framework for 60 large-cap stocks across 6 sectors using rolling sector-relative residuals, volatility-standardized z-scores, tail selection, and momentum filters; 726-day out-of-sample: 23.3% annualized return, Sharpe 1.21, robust to parameter variations
- News-Driven Alpha Models – Developed NLP-based sentiment and archetype pipelines from 350+ curated articles per firm over 5 years; outperformed FinBERT in predicting return sensitivity for Apple and Delta Airlines
- Cross-Asset Momentum – Developed medium-horizon strategies for wheat, AUD/JPY, industrial metals, gold, and crude oil using trend extraction, volatility gating, and cross-asset confirmation; achieved ~8.7% annualized return and ~3.2 Sharpe with controlled drawdowns.
- Topology-Based Classifiers – Extracted loop-structure features from 125 years of weather (3,400+ cities) and 24 years of commodity prices; $R^2 = 0.96$ (weather) and 70%+ CAGR, Sharpe >1.0 (commodities) in out-of-sample tests
- Rhythm-Offset Latent VAEs – Built Deep-learning architectures for commodity cycles; VAEs combined with gradient-boosted models delivered Sharpe >2.5 in out-of-sample backtests

MCKINSEY AND COMPANY

Chicago, IL

Associate

2023 – 2025

- Built LRP model for \$20B+ pharma portfolio using 8+ datasets, layering policy scenarios for specialty, retail strategy
- Designed valuation model for \$200M+ transformation at \$250B+ pharma distributor, factoring pod structure, complexity, realization curves
- Authored top 5–ranked AI strategy proposal for major U.S. state government (use case evaluation and implementation)
- Built transaction tracking model for ERP rollout across 50+ public agencies, raising field clarity from ~70% to 90%+ on 50K+ records
- Built financial model for \$100M+ ERP Finance upgrade, incorporating labor efficiency and readiness factors

NORTHWESTERN UNIVERSITY

Evanston, IL

Graduate Research and Teaching Assistant

2015-

2021

- Developed dark matter models and proposed experimental studies achieving 10× improvement over prior results
- Built C++ programs processing 1M+ multivariable data points to generate distributions and new physics metrics; work cited by CERN collaborations (Geneva, Switzerland)
- Taught undergraduate physics with 95% (5.7/6.0) average rating across 5+ years

PHYSICS PUBLICATIONS

- Anirudh Krovi, Ian Low, Yue Zhang, "Higgs portal to dark QED," Physical Review D, 102(5), 055003 (2020).
- Anirudh Krovi, Ian Low, Yue Zhang, "Broadening dark matter searches at the LHC: mono-X versus darkonium channels," Journal of High Energy Physics, 2018(10), 26 (2018).

ADDITIONAL INFORMATION

- **Skills:** Python, C++, SQL, Excel | ML (e.g., XGBoost), Deep Learning Models (VAEs, EBMs), NLP, Topological ML, Convex Optimization, Statistical Arbitrage & Time-Series Modeling, Backtesting
- **H1B visa holder** (Visa valid till August 2026 along with option of 3-year extension)