

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

NORTHWESTERN UNIVERSITY

Doctor of Philosophy, Theoretical Physics

Evanston, IL

March 2021

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

Bachelor of Technology in Engineering Physics

Kerala, India

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

- Built topology-based classifiers identifying patterns in weather (125 years, 3400+ cities) and commodities (24 years), achieving 0.96 R^2 (weather) and 70%+ CAGR with Sharpe >1.0 in out-of-sample backtesting (commodities)
- Developed rhythm-offset latent VAEs (Deep Learning) for arrhythmia classification (MIT BIH, 40 multi-hour ECG records totaling 20+ hours and 15M+ data points, 0.9+ AUC) and commodity modeling (24 years), producing 200%+ CAGR and Sharpe >2.5 in out-of-sample backtesting (using ML models such as XGBoost)
- Designed Quantum Mechanics (tunneling) inspired EBM (Deep Learning) for Bitcoin trend prediction (8 years), achieving Sharpe up to 0.9+ via in-sample testing
- Developed investor behavior archetypes and sentiment factor pipelines (350+ curated articles per firm), with NLP-based scoring models outperforming FinBERT in predicting return sensitivity for Apple and Delta Airlines
- Analyzed 15 years of 5-year U.S. Treasury futures using price curvature and volume to detect high-tension regimes for risk management

MCKINSEY AND COMPANY

Associate

Chicago, IL

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
- Developed management strategy for \$600M+ transformation at 35K+ employee insurer, with 3-year roadmap and stakeholder journey map

NORTHWESTERN UNIVERSITY

Graduate Research and Teaching Assistant

Evanston, IL

2015-2021

- Developed dark matter models and proposed experimental studies achieving 10 \times 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 Modeling | Machine Learning (e.g., XGBoost), Deep Learning Models (VAEs, EBMs), NLP, Topological ML | LaTeX, Hindi, Telugu, Intermediate Arabic.
- **H1B visa holder** (Visa valid till August 2026 along with option of 3-year extension)