

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 and Strategy)

May 2023

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

NORTHWESTERN UNIVERSITY

Evanston, IL

Doctor of Philosophy, Theoretical Physics

March 2021

NATIONAL INSTITUTE OF TECHNOLOGY CALICUT

Kerala, India

Bachelor of Technology in Engineering Physics

May 2014

EXPERIENCE

INDEPENDENT RESEARCH PROJECTS

Chicago, IL

Additional projects, all working papers, results: <https://anirudhkvs.github.io/anirudh-fullsite/>

2025 - Present

- Built persistent homology 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 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
- Designed Quantum Mechanics (tunneling) inspired EBMs 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 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

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

NORTHWESTERN UNIVERSITY

Evanston, IL

Graduate Research and Teaching Assistant

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; Energy-Based Models, Variational Autoencoders, Persistent Homology, Topological Data Analysis; LaTeX, Hindi, Telugu, Intermediate Arabic.
- **H1B visa holder** (Visa valid till August 2026 along with option of 3-year extension)