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   **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 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 EBMs (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   **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× 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, Convex Optimization | LaTeX, Hindi, Telugu, Intermediate Arabic.
- **H1B visa holder** (Visa valid till August 2026 along with option of 3-year extension)