Dhruv Oza

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EDUCATION

M.S. in Financial Engineering, University of Illinois Urbana-Champaign | 2023-2025 | Champaign, IL
GPA: 3.7/4.0; **GRE**: Math 170/170
B.Tech in Computer Science and Engineering, Indian Institute of Technology Kanpur | 2018 - 2022 | India
Courses: Undergraduate Level: Linear Algebra, Calculus, Probability; Graduate Level: Financial Computing, Algo Trading System Design and Testing, Stochastic Calculus, Statistical Methods in Finance

AWARDS & HONORS

- **Winner, Best Practicum Project** (Final Capstone Project), MSFE Class of 2025, University of Illinois Urbana-Champaign (Top project among 26 students)
- **Winner, University Poker Tournament**, 2021
- **IITJEE 2018 Exams:** Ranked in the **top 0.1% nationally** in JEE Main (out of ~1.5 million candidates), and **top 0.5%** in JEE Advanced (out of ~250,000 candidates)

QUANT EXPERIENCE

Quantitative Researcher, WSQ | July 2024 - Present | NYC,NY
- WSQ: Quant mentorship program led by industry professionals, providing hands-on quant training
- Developed a **statistical arbitrage cryptocurrency** strategy integrating **48-hour momentum**, **4-hour volume/volatility**, and **taker volume** to assess market participation of aggressive traders across the top 6 major crypto pairs (BTC, SOL, ETH, ADA, XRP, LTC)
- Achieved **backtested** performance: **net Sharpe ratio of 2.54**, a **max drawdown of 13.8%**, with significant alpha in a **dollar-neutral portfolio**

Quantitative Research Intern, Metrix LLC | July 2024 - August 2024 | Chicago, IL
- Metrix LLC: Global distributor of financial data and AI-driven analytics for 4000+ U.S. stocks
- Optimized a **momentum trading strategy** incorporating footprint analysis, volume profile, and liquidity index (measures liquidity in the market around certain price levels, easing trade execution)
- This optimized strategy **boosted the backtested Sharpe ratio by 0.3 and reduced total transaction costs by 8%**
- Built an end-to-end **data pipeline**, processing **15 GB** of tick data daily for **real-time event alerts**, leveraging market/volume profile analysis

Quantitative Strategist, Alpha Alternatives | June 2022 - July 2023 | Mumbai, India
- Alpha Alternatives: Multi-asset class firm specializing in sophisticated, proprietary investment solutions
- Developed a **market breakout trading strategy** for energy and metals commodities, designed to capitalize on trends following periods of volatility.
- Achieved a **Sharpe ratio of 2.2** with a **max drawdown of 18%,** backtested for 2011-2023 data
- Engineered a real-time **data pipeline** processing **10+ GB of options market data daily**, generating live volatility skew visualizations across multiple option chains

QUANT PROJECTS

Systematic Momentum / Reversal Strategy
- Engineered a **momentum reversal strategy** utilizing Heikin-Ashi, Bollinger Bands, ATR, and other mathematical indicators.
- Backtested strategy achieved **2.1 SR**, and **15% max drawdown** over 5 years of crypto historical data

NBA Sports Betting
- Developed a multi-model approach (**XGBoost and LSTM**) for NBA game predictions, yielding **68% accuracy on Moneyline** (Game winners) and **59% on over/under** bets

QUANT SKILLS: Python (Pandas/NumPy), C++/C#, R, MATLAB, SQL, Linux, Java Basics, AWS, Git, Econometrics, Regression analysis, Quantitative Trading, Backtesting, Statistical Modelling, Mathematical Modelling, Machine Learning
INTERESTS: Poker, Chess, Sports Betting
LANGUAGES: English, Hindi, Gujarati