

AMIT TOMAR

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EXPERIENCE

Quantitative Analyst Summer Intern

May 2025 – Aug 2025

University of Illinois Urbana-Champaign

Champaign, IL

- Analyzed crypto-asset return drivers using Farcaster network topology, interaction intensity, & user centrality measures.
- Constructed cross-sectional factors capturing network structure and attention; evaluated factor returns and stability.
- Assessed statistical significance using rolling cross-validation and strict out-of-sample backtests across multiple horizons; monitored Sharpe ratio, information coefficient (IC), drawdown, and turnover.

Financial Data Analyst (Risk & Modeling)

May 2022 – Dec 2023

IDfy

Mumbai, India

- Analyzed credit-risk & fraud-detection models across large datasets using probabilistic & statistical learning techniques.
- Monitored feature stability, distributional drift, and model calibration across time under evolving economic regimes.
- Evaluated classifier performance using ROC, precision-recall, and stability metrics while supporting internal risk validation processes.

Financial Machine Learning Analyst

Jun 2018 – Apr 2022

IDfy (AI-Driven Risk & Identity Infrastructure for Financial Institutions)

Mumbai, India

- Analyzed statistical learning outputs for credit scoring and transaction anomaly detection at production scale.
- Applied regression analysis and hypothesis testing to assess temporal stability across cohorts and changing data-generating processes using rolling windows, interaction terms, structural break tests, and out-of-sample validation.
- Translated empirical results into interpretable risk insights supporting operational and analytical decision-making.

PAPERS & PUBLICATIONS

Machine Learning-Enhanced Momentum Trading Strategy

[\(paper\)](#)

- Developed ensemble momentum signals using multi-horizon features with walk-forward validation and conservative signal selection across asset classes to reduce data-snooping bias.
- Evaluated performance across volatility regimes using Sharpe ratio, maximum drawdown, autocorrelation, and turnover under realistic transaction cost assumptions and varying liquidity, rebalancing frequency, and execution constraints.

The Predictive Power of Alternative Data in Financial Markets

[\(paper\)](#)

- Quantified equity return predictability from search attention, employee sentiment, and macro confidence indicators using panel data methods with firm fixed effects, clustered standard errors, and robust significance testing controls.
- Estimated fixed-effects regressions with clustered standard errors, isolating statistically significant signals while controlling for firm and time effects.

SELECTED ANALYTICAL PROJECTS

Multi-Asset Predictive Modeling Framework

Mar 2025 – Sep 2025

- Analyzed multi-factor model outputs combining macro signals, technical indicators, and machine learning forecasts.
- Evaluated portfolio construction logic with exposure constraints and dynamic asset selection targeting factor neutrality and controlled risk.

Systematic Options Strategy Analysis

Jan 2025 – Jul 2025

- Analyzed systematic options strategies exploiting implied volatility decay, gamma exposure, and structural effects around expiration under transaction costs, liquidity constraints, execution assumptions, Greeks monitoring, and risk limits.
- Evaluated robustness using rolling backtests, stress testing, and regime-specific diagnostics with emphasis on tail risk.

EDUCATION

University of Illinois Urbana-Champaign

Master of Science in Financial Mathematics

USA

Indian Institute of Technology (IIT) Bombay

B.Tech in Aerospace Engineering

India

TECHNICAL SKILLS

Programming

Python, C++, R, MATLAB, SQL

Analytical Methods

Regression, Hypothesis Testing, Time-Series, Cross-Sectional, Panel Data

Investment Analytics

Factor Models, Performance Attribution, Sharpe Ratio, Information Ratio, Drawdown

Tools

Bloomberg Terminal, Git, Linux, TradingView, Zerodha API