

Saurabh Shahdadpuri

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EDUCATION

The University of Chicago

Chicago, IL

Master of Science in Financial Mathematics (GPA: 3.85/4.0)

Expected December 2024

- Courses: Time Series Analysis, Machine Learning, Regression, Stochastic Processes, Numerical methods, Fixed Income Derivatives, Quantitative Trading Strategies, Options Pricing, Portfolio Theory & Risk Management

BITS Pilani, K K Birla Goa Campus

Goa, India

Major – Bachelor of Engineering, Minor – Finance (GPA: 3.58/4.0)

June 2021

- Courses: Probability & Statistics, Differential Equations, Linear Algebra, Multivariable Calculus, Derivatives & Risk Management, Security Analysis & Portfolio Management, Business Analysis and Valuation, C Programming

EXPERIENCE

Flow State Investments LP

Chicago, IL

Quantitative Analyst Intern

June 2024 - August 2024

- Researched and tested statistical arbitrage strategies in US Equities; employed clustering, optimization, and Sparse PCA to develop mean-reverting portfolios; achieved an OOS Sharpe of 0.7, uncorrelated with major equity drivers
- Developed a sector- and market-neutral momentum strategy in US Equities using residual returns; backtested under volume and slippage constraints, achieving a Sharpe ratio of 0.9 with ~0.1 correlation to SPY and MTUM factors
- Researched a long-short cross-asset carry strategy; utilized lagged carry values to forecast future trades

O'Neil Capital Management India

Bangalore, India

Quantitative Analyst

June 2021 – June 2023

- Led the research and development of a quantile trading strategy deployed live in the Indian Futures market; ranked equities based on fundamentals and intraday vol data, outperforming the benchmark with a Sharpe ratio of 1.3
- Developed a backtesting engine with a systematic scoring framework in Python; used this pipeline to analyze performance, return distributions, and risk metrics, optimizing exit nodes for 10+ algorithmic strategies

Quantitative Analyst Intern

August 2020 – December 2020

- Created a scalable, OOP-based Python framework for portfolio analysis in the [MarketSmith India](#) app; generated comprehensive portfolio performance reports by computing key metrics like Sharpe, Calmar, and EPS strength

PROJECT & PUBLICATIONS

Manteio Capital

Chicago, IL

Quantitative Researcher – UC Project Lab

March 2024 - June 2024

- Developed a calendar spread trading strategy using a Reinforcement Learning model; enhanced model performance and accuracy by applying PCA on IRS data for state space reduction

AlphaROC

Chicago, IL

Quantitative Researcher – UC Project Lab

January 2024 – March 2024

- Created a modular machine learning forecasting framework using the sklearn library; implemented models like Lasso, Random Forest, and Gradient Boosting to predict CPI, achieving an OOS R-squared of 36%

Options IV Returns Prediction using Machine Learning models

November 2019 – December 2019

- Devised a straddle returns forecasting strategy using Random Forest and Gradient Boosting Classifier models; engineered 14 features, achieving 57% out-of-sample accuracy and an overall Sharpe ratio of 1

Influence of Time on the Efficiency of Indian Markets ([Published](#))

December 2020 – February 2021

- Examined the efficiency of Indian markets by conducting ANOVA tests on daily return correlations; concluded with 95% confidence that weak-form efficiency existed and had strengthened over a 6-year period

SKILLS

Computing & Tools: Python, SQL, Pandas, NumPy, SciPy, PyTorch, Scikit-learn, Git, Postman

Domain Knowledge: Statistical Modeling, Systematic Strategy Development, Portfolio management, Risk Analytics

Machine Learning Competencies: Supervised Learning - Regression, Classification, Decision Tree, Ensemble Methods (Random Forest, AdaBoost, XGBoost), Unsupervised Learning - KMeans & Hierarchical Clustering, PCA

EXTRACURRICULAR

Braking Division Lead, SAE BAJA Club

February 2018 – February 2019

- Led a team of four to design and manufacture the braking sub-system of an all-terrain vehicle from scratch, representing BITS Goa in the national-level SAE Baja competition among 250+ colleges