AKSHAY DUGAR

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EDUCATION

MIT SLOAN SCHOOL OF MANAGEMENT — Cambridge, MA

Candidate for Master of Finance, February 2025 — 2023 - Present

- Concentration in Financial Engineering
- Coursework: Financial Engineering, Financial Markets, Advanced Analytics of Finance, Options and Futures Markets, Fixed Income Securities and Derivatives, Alphanomics, Optimization Methods, Machine Learning in Finance

UNIVERSITY OF ILLINOIS, URBANA-CHAMPAIGN — Champaign, IL

B.S. in Engineering Mechanics, B.S. in Mathematics; Chancellor's Scholar — 2019 - 2023

- Minors in Statistics and Business
- Relevant Coursework: Abstract Linear Algebra, Probability Theory, Real Analysis, Ordinary Differential Equations, Partial Differential Equations, Applied Regression and Design, Stochastic Processes, Statistical Data Management, Numerical Methods I, Numerical Analysis, Computational Mechanics
- Recipient of Engineering Freshman, Mechanical Engineering Visionary, and Donald E. Carlson Scholarships

EXPERIENCE

CALAMOS INVESTMENTS — Chicago, IL

Quantitative Analyst Intern — Summer 2024

- Developed a risk analysis tool, creating code to calculate portfolio risk and built a dashboard using SQL and Python to enable Portfolio Managers to monitor portfolios' factor risks according to the Barra Model
- Synthesized and presented research papers, sparking new projects (e.g. deep tail risk analysis and enhanced momentum)
- Constructed variations on momentum strategies; improving on a traditional momentum strategy with 3-5% greater annualized return, increasing Sharpe ratio and reducing drawdown by 10-15% in backtests

MIT SLOAN ACTION LEARNING PROJECT - TRADEWEB MARKETS — Cambridge, MA

Joint Finance Lab — Winter 2023

- Processed and analyzed TRACE data for US corporate bonds to improve bond pricing algorithms
- Conducted comprehensive analysis of daily trading volume breakdown, economic transactions, and trade direction
- Utilized time series analysis techniques, including ARIMA models and DTW, to analyze bond returns over 2023 and identify correlation and similarity between returns over time for several bonds

MIT SLOAN ACTION LEARNING PROJECT - MCKINSEY & CO. — Cambridge, MA

Joint Finance Proseminar in Investment Banking — Fall 2023

- Conducted comprehensive analysis of Country Risk Premiums (CRPs) in DCF valuations, evaluating five different methods of calculation as well as two methods of implementation
- Executed correlation analysis between equity performance of five countries and global markets to evaluate impact of country-specific risks on investment returns

JPMORGAN CHASE & CO. — Chicago, IL

Tax-Oriented Investments Intern — Summer 2022

- Developed an automated reporting system for statistical discrepancies between internal calculations and external sponsor calculations for budgetary breakdowns of multi-million dollar infrastructure projects
- Presented for upper management regarding building out data infrastructure for 100+ renewable energy deals

STATE FARM INSURANCE — Champaign, IL

Technology Intern — Summer 2021

- Optimized a data pipeline with database insertions, ML models, and displays for technology investment timelines, saving hundreds of hours of manual work annually
- Built an HTML web application through Flask, allowing agents to interact with aforementioned ML models

ADDITIONAL INFORMATION

- Software: Python, R, SQL, MATLAB, Bloomberg, FactSet, Java, Mathematica, LaTeX
- Placed 13th out of 411 teams in the 2023 CME Group University Trading Challenge
- Research experience with the Beckman Institute, Illinois Risk Lab, and Environment-Enhancing Energy Lab