JACK DEAN

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EDUCATION

LEHIGH UNIVERSITY — Bethlehem, PA

2021 – 2022 *Master of Science in Financial Engineering*

- Studies focused in Quantitative Risk; Graduate GPA 3.95
- Completed coursework in Stochastic Calculus, Time Series Analysis, Random Processes, Statistical Computing, Optimization, Machine Learning, Derivative Securities & Risk Management, and Advanced Fixed Income Investments

2017 – 2020 *Bachelor of Science in Finance, Cum Laude*

- Finance Major GPA 3.75; Patriot League Academic Honor Roll (3x); Dean's List (2x)

EXPERIENCE

MILLENNIUM MANAGEMENT – TWIN LIGHTS ASSET MANAGEMENT — New York, NY

2021 – Present *Quantitative Analyst (Part-Time)*

- Building technical model to predict cash and synthetic spread levels considering prior proprietary research and additional factors; model fitting done in R with real-time implementation in Bloomberg worksheets
- Managed quantitative strategy following mean reversion model (developed during internship), generating 8% annualized returns on utilized capital

Summer 2021 *Fixed Income Quantitative Analyst Intern*

- Developed mean reversion trading model in Excel covering a variety of macro products including corporate spreads, synthetic credit, equities, rates, and volatility; designed automated system to report results to traders using Visual Basic (VBA)
- Projected dealer inventories in corporate bonds in real-time using TRACE market flows, Federal Reserve, and Index Fund Flows in MS Excel with VBA
- Conducted proprietary research in R on different market conditions effect on spreads such as Issuance/Primary Calendar, Street Balance Sheet, Index Extension, Earnings Blackout

GRADUATE RESEARCH

SPORTS GAMBLING SYSTEMATIC ARBITRAGE — Bethlehem, PA

2021 – 2022 *Project Lead*

- Pitched research idea of studying algorithmic sports trading strategies; project conducted under a corporate sponsor at BNP Paribas
- Developing algorithmic strategy using combinations of sports gaming market positions to generate returns; combinations mimics options trading spreads
- Fitted performance probability distributions to price synthetic positions using Scipy.Stats in Python and Time-Series analysis in R
- Assisted in developing a web scraping algorithm to collect and analyze market position data in real-time using Python

TECHNICAL SKILLS

- Bloomberg Terminal with BQNT and Excel API
- Python (Pandas, NumPy, ScikitLearn, BeautifulSoup, Scipy.Stats, statsmodels API, BQL)
- R (tseries, stats, fgarch, markdown)
- Microsoft Office with Visual Basic for Applications (VBA)

COMMUNITY INVOLVEMENT AND LEADERSHIP

LEHIGH FOOTBALL (NCAA DIVISION I, PATRIOT LEAGUE CHAMPIONS 2017)

- Proven ability to perform in high pressure environments, executing role in critical game situations such as game-winning field goals and strategic punts
- True walk-on and four-year starting Long Snapper
- Appointed by Head Coach to team's Leadership Council

FENCING REFEREE – Certified for USFA sanctioned tournaments and NJ high school events
DELTA UPSILON FRATERNITY – House Manager
BOY SCOUTS OF AMERICA – Eagle Scout