Sahil Nayyar

Chicago, IL | (858) 349-6962 | sahilnayyar@uchicago.edu | LinkedIn

EDUCATION

University of Chicago **Chicago, IL**
Master of Science in Financial Mathematics **Expected: December 2025**

- Expected Courses: Portfolio Theory & Risk Management, Python, Derivatives Pricing, Probability & Stochastic Processes, Applied Algorithmic Trading, Machine Learning for Finance, Mathematical Market Microstructure

University of Southern California **Los Angeles, CA**
Bachelor of Science in Financial Mathematics (GPA: 3.78/4.00) **Graduated: December 2020**

- Courses: Multivariable Calculus, Linear Algebra, Number Theory, Python, Statistical Inference and Data Analysis, Database Systems and Data Querying, Mathematical Methods in Economics, Advanced Econometrics

SKILLS

Computing: Python, C/C++, Java, R, MATLAB, SQL, VBA, Microsoft Excel
ML and DS: Supervised, Unsupervised, Reinforcement Learning, Feature Engineering, Time-Series Analysis
Trading Products: Equities, Options, Futures, Commodities, Currencies, Cryptocurrencies, ETFs, REITs
Licenses and Certificates: SIE, Series 63, Series 79, Akuna Virtual Trading Competition, Akuna Capital Options 101

PROFESSIONAL EXPERIENCE

Piper Sandler **San Francisco, CA**
Investment Banking Associate, Consumer Group **June 2021 – May 2024**
First year Associate in the Consumer coverage group focused on M&A and IPOs across 6 different sub-verticals

- Built quantitative, dynamic financial and valuation models using Microsoft Excel and VBA, leveraging expansive source data; presented these models to the board of directors, investment committees for potential buyers
- Developed and maintained an internal proprietary database for public companies within different consumer sectors using Python for data collection, integration, analysis, and visualization, reducing consolidation time by 40%
- Conducted extensive market research using different financial software and databases including Bloomberg Terminal to conduct predictive analysis, develop public markets outlooks, and analyze market trends
- Spearheaded deal execution within tight timelines by guiding junior analysts and collaborating with senior bankers and client management teams; completed 4 M&A transactions, 6 IPOs, and multiple capital raises

University of Southern California **Los Angeles, CA**
Teaching Assistant / Tutor **August 2018 – June 2020**
Teaching Assistant for Math 307: Statistical Inference and Data Analysis | Tutor for Econ 305: Macroeconomics

- Led over 30 hours of discussions for Probability and Statistics for a class of ~28 students, covering distributions, random variables, estimation, and other statistical concepts; regular attendees scored an A- on average
- Conducted weekly office hours to assist with programming assignments and homework using R, focusing on simulations, regression analyses, and other quantitative methods to bolster learning from lectures
- Tutored Intermediate Macroeconomic Theory for ~10 student-athletes, focusing on interest rates, inflation, business cycles, financial markets, building a foundation to analyze macroeconomic indicators and risks

PROJECTS

Python Specialization (UC Berkeley Extension) **Remote**
Statistical Arbitrage System with Machine Learning, Bayesian Optimization **June 2023 – August 2023**

- Extracted pertinent data for 50+ high volume securities using AlphaVantage and applied K-means clustering to group based on relevant features such as volatility and rolling beta to enhance pair selection process
- Leveraged several libraries to structure and analyze financial data, conduct time-series analysis, assess stationarity (ADF), check for cointegration (Engle-Granger), estimate Kappa and half-life, and implement the strategy
- Developed a custom backtesting engine using Backtrader to simulate the trading strategy, optimizing parameters including long and short triggers, stop-loss factor, and holding time using Bayesian Optimization
- Created detailed performance reports benchmarking percentage returns against SPY, underscoring risk-adjusted performance metrics including Sharpe ratio, visualizing performance using equity curves and drawdown graphs
- Optimized and improved the model parameters by incorporating performance analysis feedback, leading to a 6% increase accuracy and 12% reduction in volatility, indicated by improved Sharpe ratio and lower drawdowns

ADDITIONAL INFORMATION

Interests: Poker and other card games, fantasy soccer, football, travel, surf, reading, volunteering