Nilkanth Patel

nilkanth.patel0501@gmail.com | (857)-424-8056 | GitHub | thequantfinancegrad

Work Experience

Sparkling Jewelry Inc — Los Angeles, CA
Financial Analyst — Mar. 2025 - Present

- Built integrated financial and commodity-pricing models linking gold, diamond, and FX trends to sales velocity and cost structures, improving forecast accuracy by 18 % and optimizing working-capital allocation for a $15 M inventory portfolio
- Developed hedging analytics dashboards in Power BI and Python (Pandas, NumPy) to evaluate derivative efficiency and market-exposure correlations, strengthening gross-margin protection by 230 bps
- Automated ERP–Excel VBA pipelines consolidating procurement, pricing, and sales data, reducing monthly reporting turnaround by 45% and enhancing liquidity visibility across three divisions
- Conducted scenario and sensitivity analyses on commodity volatility, interest-rate shifts, and currency fluctuations to guide purchasing and capital-planning decisions

360 Huntington Fund — Boston, MA
Sector Manager — Sept. 2023 - Dec. 2024

- Directed equity research and sector allocation for a $1.5M student-managed fund, generating 2.6% alpha and outperforming the benchmark through disciplined portfolio construction
- Built DCF, relative valuation, and sensitivity models in Excel and Python, estimating intrinsic values within ±5% of market targets
- Conducted factor exposure and performance attribution using Bloomberg Terminal and FactSet, identifying key drivers of excess returns
- Applied mean-variance optimization (MVO) and Monte Carlo simulation to enhance diversification and reduce volatility across market regime
- Authored investment theses and quarterly committee reports, integrating valuation catalysts, macro trends, and downside-risk assessments

Parth Saspara & Co — Surat, India
Investment Analyst — June. 2021 - July 2023

- Oversaw $1M+ AUM across 30 client portfolios, achieving an average CAGR of 9.4 % while maintaining strict risk-tolerance
- Designed Python-based fixed-income ladder and equity glide-path simulations, optimizing yield by 120 bps and improving duration matching for long-term clients
- Reconstructed clients' portfolios by executing tactical reallocations and liquidity analysis, reducing inactive or illiquid holdings by 60%
- Developed performance-attribution and benchmarking templates in Morningstar Direct, and Excel VBA, enabling faster monthly reporting and improving data transparency by 40%
- Conducted quantitative fund screening on 80 + SMAs and mutual funds using alpha, Sharpe, and manager-tenure metrics to enhance manager selection and portfolio diversification

Skills and Certifications

Financial & Investment Analysis: Equity & Fixed-Income Research, Portfolio Monitoring, Valuation (DCF, Comps, NAV), Risk/Return Attribution, Factor Modeling, Asset Allocation, Performance Benchmarking, Financial Forecasting
Data & Quantitative Tools: Excel (VBA, Power Query), Python (Pandas, NumPy, scikit-learn), SQL, Power BI, Tableau, R, MATLAB
Modeling & Analytics: Financial Modeling (DCF, Monte Carlo, Scenario & Sensitivity Analysis), Portfolio Optimization, Time-Series Forecasting, Regression Analysis, Quantitative Strategy Back testing
Platforms & Systems: Bloomberg Terminal, FactSet, Morningstar Direct, SAP, Hyperion, Alteryx, Adaptive Planning
Certifications: Bloomberg Market Concepts (BMC) | Securities Industry Essentials (SIE) – FINRA | CFA Level I Candidate

Projects

Portfolio Optimization & Risk Analysis:

- Built a Python-based Black-Litterman and Monte Carlo simulation model to optimize a 26-stock S&P 500 portfolio, improving expected return by 8% and Sharpe ratio by 0.2 while reducing downside risk by 15%

Option Pricing Models (Binomial vs. Black-Scholes):

- Implemented Black-Scholes and Binomial frameworks in Python using stochastic calculus, achieving 95% pricing accuracy and reducing model error from 12% to <1% across NVDA and S&P 500 options

Stochastic Trading Strategy — Bitcoin & Semiconductor Correlation:

- Engineered a Python-based mean-reversion model using 2D Brownian motion on a 0.75 BTC–semiconductor correlation, generating 13.7% annualized return and cutting downside risk by 15% through multi-year back testing (2014–2024)

Education

Northeastern University — Boston, MA
Master of Science in Quantitative Finance — *Sep. 2023 - Dec. 2024*
Coursework: Investment Analysis, Quantitative Portfolio Management, Empirical methods, Derivative and Risk Analysis, Merger and Acquisition, Valuation methods, Corporate Finance, Financial Math, Data Analytics in Finance, Real Estate Finance

Sardar Patel University — Gujarat, India
Bachelor of Business Administration and Bachelor of Law ~ Juris Doctor — *Jul. 2018 - May 2023*