Amol Sharma

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GitHub, LinkedIn, HackerRank

Aspiring finance professional with expertise in quantitative methods and a strong interest in market dynamics. Passionate about Derivatives and Risk Management, while open to diverse opportunities in financial analysis and quantitative research.

Academic Record

eMasters Quantitative Finance & Risk Management	July, 2024	Indian Institute of Technology, Kanpur	9.5
MTech Structural Dynamics & Earthquake Engineering	2016	Visvesvaraya National Institute of Technology, Nagpur	7.89
BE Civil Engineering	2014	Jabalpur Engineering College	75%
Class XII	2009	Marble Rock School (CBSE)	72.4%
Class X	2007	Christ Church Boys Senior Secondary School (CBSE)	82.2%

Certifications

- NISM Series XII – Securities Market Foundation
- NISM Series VIII – Equity Derivatives
- NISM Series IV – Interest Rate Derivatives
- NISM Series I – Currency Derivatives
- NISM Series XVI – Commodity Derivatives
- NISM Series VII – Securities Operations & Risk Management
- NSE NCFM Derivatives (Advanced) Module
- Probability & Statistics for Business & Data Science (Udemy)
- The complete SQL Bootcamp (Udemy)
- The complete Python Bootcamp (Udemy)
- Python for Machine Learning & Data Science Masterclass (Udemy)
- Quantitative Financial Modelling in Microsoft Excel (Udemy)

Relevant Coursework

- Foundation of Economics & Finance
- Intro. to Derivatives Contracts
- Quantitative Methods in R & Python
- Treasury & Credit Risk Mgmt.
- ML in Financial Modelling
- Security Analysis & Portfolio Mgmt.
- Advanced Financial Modelling
- Technical Analysis in Finance
- Adv. Derivative Contracts & Pricing

Projects

1. Option Valuation: Black Scholes v/s Binomial v/s Monte Carlo
   - Conducted option pricing for Tata Steel options using Black-Scholes, Binomial, and Monte Carlo methods in Python; analysed pricing discrepancies and volatility smiles.
   - Modelled dynamic delta hedging for ATM call options using the 'Python in Excel' feature and examined option Greeks' variation with underlying price and time, deriving actionable insights for risk management.

2. Dynamic Volatility Forecasting for Risk Management & Derivatives Valuation: EWMA & GARCH (1,1) approaches.
   - Forecasted NIFTY 50 volatility using EWMA and GARCH models, validating with econometric tests.
   - Priced near-month call and put options on NIFTY 50 using forecasted volatility, including implied volatility calculations.
   - Calculated VaR for a single stock portfolio, projecting risk over specified horizons and confidence intervals.

3. Conducted a Secondary Research Report on Zero-Day-to-Expiry (0DTE) Options, analysing media perspectives, associated volatility patterns (VIX1D Index), retail trading trends, and regulatory challenges. Highlighted implications for market stability and business strategies.

Work Experience

F2S Foundation to Structures, Noida — Structural Engineer (On Contract) — Aug22 – Present (30 Months)
- Performed seismic analysis and wind load calculations for structures to ensure their safety and compliance with relevant engineering standards.

Kalmegh Infratech Limited, Raipur — Consultant (On Contract) — Aug22 – Present (30 Months)
Consultant – Civil — Aug18 – July 22 (48 Months)
- Involved in supply, erection and commissioning of LT distribution lines.
- Led the expansion of firm's business operations involving maintenance of transformers.
- Other duties included tender preparation and purchase related dealings with government and private firms.

Other Interest and Hobbies ▪ Reading fiction ▪ Geopolitics