

Amol Sharma

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Aspiring finance professional with an engineering background and expertise in quantitative methods. Passionate about derivatives and risk management, and open to 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	7.5
Class XII	2009	Marble Rock School (CBSE)	72.4%
Class X	2007	Christ Church Boys Senior Secondary School (CBSE)	82.2%
Certifications	<ul style="list-style-type: none">NISM Series 12 – Securities Market Foundation Certification ExaminationNISM Series 8 – Equity Derivatives Certification ExaminationNISM Series 4 – Interest Rate Derivatives Certification ExaminationNISM Series 1 – Currency Derivatives Certification ExaminationNISM Series 16 – Commodity Derivatives Certification ExaminationNISM Series 7 – Securities Operations & Risk Management Certification ExaminationNSE NCFM Derivatives (Advanced) ModuleProbability & 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)		
Key Skills	<ul style="list-style-type: none">NumPy ▪ Pandas ▪ Matplotlib ▪ Seaborn ▪ Scikit Learn ▪ Jupyter Notebook ▪ SQL ▪ Excel (VBA) ▪ Modelling ▪ RiskOption Pricing ▪ Option Greeks ▪ Delta Hedging ▪ Volatility Smile ▪ Volatility Forecasting ▪ VaR & ES ▪ Econometrics		
Relevant Coursework			
<ul style="list-style-type: none">Foundation of Economics & FinanceTreasury & Credit Risk Mgmt.Advanced Financial ModellingIntro. to Derivatives ContractsML in Financial ModellingTechnical Analysis in FinanceQuantitative Methods in R & PythonSecurity Analysis & Portfolio Mgmt.Advanced Derivative Contracts & Pricing			
Projects			
<p>1. Option Valuation: Black Scholes v/s Binomial v/s Monte Carlo</p> <ul style="list-style-type: none">Conducted option pricing for Tata Steel options using the three methods in Python; analysed pricing discrepancies and volatility smiles and compared implied volatility with historical volatility to identify undervalued and overvalued options.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.			
<p>2. Dynamic Volatility Forecasting for Risk Management & Derivatives Valuation: EWMA & GARCH (1,1) approaches.</p> <ul style="list-style-type: none">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.			
<p>3. Conducted a Secondary Research Report on Zero-Day-to-Expiry (ODTE) Options, analysing media perspectives, associated volatility patterns (VIX1D Index), retail trading trends, and regulatory challenges. Highlighted implications for market stability and emphasized on the necessity for regulatory oversight to balance innovation with risk mitigation.</p>			
Work Experience			
<div>F2S Foundation to Structures, Noida</div> <div>Structural Engineer (On Contract)</div> <div>Aug22 – Present (30 Months)</div> <ul style="list-style-type: none">Performed seismic analysis and wind load calculations for structures to ensure their safety and compliance with relevant engineering standards.			
<div>Kalmegh Infratech Solution, Raipur</div> <div>Consultant (On Contract)</div> <div>Aug22 – Present (30 Months)</div> <div>Consultant – Civil</div> <div>Aug18 – July 22 (48 Months)</div> <ul style="list-style-type: none">Spearheaded the supply, erection and commissioning of low-tension (LT) electricity distribution lines in CG rural areas.Expanded the firm's operational scope post-COVID-19 by securing maintenance and replenishment related contracts for transformers, handling tender preparation and negotiations with government and private entities.			