

# 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 (ODTE) 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