

Aditya Parthiban

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EDUCATION

NITTE MEENAKSHI INSTITUTE OF TECHNOLOGY

Bachelor of Engineering in Computer Science & Engineering

Bengaluru, KA

Dec 2022 – Present

- Object Oriented Programming, Data Structures & Algorithms, Database Management System, R Programming, Python (pandas, numpy, matplotlib, seaborn), C Language, Java, SQL.

Minor Degree Program in Economics & Finance

- **Expected Coursework:** Financial Mathematics, Probability & Stochastics, Financial Institutions & Markets, Security Analysis & Portfolio Management.

PROJECTS

[\[Link\]](#) VaR and CVaR Modelling (Historic, Parametric, and Monte Carlo)

- **Developed and implemented** three risk models—Historical VaR & CVaR, Parametric VaR & CVaR, and Monte Carlo Simulation—providing comprehensive risk analysis for a diversified stock portfolio.
- **Utilized Monte Carlo simulations** with Cholesky decomposition to model correlated stock returns, simulating 400 scenarios to estimate portfolio risk at a 95% confidence level.
- **Visualized and analyzed portfolio risk** by calculating and comparing VaR and CVaR across different methods, enabling data-driven insights into potential market exposure and risk management strategies.

[\[Link\]](#) Black Scholes Merton and Greeks for Pricing European Options

- **Implemented the Black-Scholes model** to price European call and put options, calculating key option Greeks—Delta, Gamma, Theta, Vega, and Rho—to assess sensitivity to factors such as underlying asset price, volatility, and time to expiration.
- **Visualized option sensitivities** through plots of Delta, Gamma, Theta, Vega, and Rho, providing insights into how option prices react to market variables, including changes in asset price, time, volatility, and interest rates.

[\[Link\]](#) Feature Engineering the Nvidia Stock

- **Engineered key features** for stock analysis, including daily returns, moving averages, volatility, and lagged features, to gain insights into price trends, market activity, and volatility of NVIDIA's stock over a one-year period.
- **Provided a foundation for predictive modeling** by extracting and preparing features such as volatility, cumulative returns, and temporal data, which can be used to build regression models and machine learning classifiers for price prediction and trend analysis.

ACCOLADES

- **Delegate at Harvard University:** Selected as one of 350 delegates from over 50,000 applicants for Harvard Project for Asian & International Relations 2024 (HPAIR 24').
- **Delegate at Indian Institute of Management Bangalore (IIMB):** Selected as one of 270 delegates from over 1500 applicants for Young Leaders Summit 2023 (YLS 23').
- **Appsmith Hacktoberfest 2023 Winner:** Designed and published a UI template using Appsmith's built-in widgets, winning the hacktoberfest contest.

ADDITIONAL

Skills: Leadership, Communication, Teamwork, Project Management, Networking, and Presentation

Languages: Fluent in English, Kannada, Tamil, Malayalam; Conversational Proficiency in Hindi