

Tushar Yadav

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EDUCATION

IIT Roorkee

B.Tech Civil Engineering

2020–2024

CGPA: 8.3/10

Courses: Machine Learning in Business Analytics, Numerical Methods & Computer Programming, (Modeling, Simulation and Optimization), Probability & Statistics

SKILLS

Languages: C++, Python, SQL, JavaScript, TypeScript, HTML, CSS

Tools: Git/GitHub, Excel, Power BI

Libraries and Framework: Pandas, Numpy, Scikit, Matplotlib, React, Next.js, Streamlit, Yfinance, Plotly

Analytics & Modeling: Statistical modeling, time series analysis, options pricing, financial forecasting

EXPERIENCE

Market Analyst | Axxela

July 2024 – Present

- Traded in U.S. Fixed Income instruments, with a focus on SOFR and Fed Funds Futures.
- Designed and backtested spread & butterfly strategies using macroeconomic insights and data extracted via Bloomberg Terminal (Excel & COM API); leveraged Python (Pandas, NumPy) for analysis.
- Delivered highest desk profitability in FY 2024 with consistent 30% MoM returns by leveraging early prototype workflows that later inspired a self-serve chart analysis tool.

PROJECTS

Black Scholes Model Options Pricing ([Live Demo](#))

Python, Pandas, Numpy, Scikit, Seaborn, Matplotlib, Streamlit

- Built an interactive web dashboard using Python libraries to calculate Black-Scholes European call and put option prices.
- Visualized Options Pricing sensitivity with a dynamic heatmap showing impact of volatility and spot price.

ChartMind: AI-Powered Stock Analyser ([Live Demo](#))

Google Gemini 2.0, Yahoo Finance, Python, Pandas, Plotly

- Designed an AI-augmented stock analysis dashboard that combines real-time financial data with multimodal capabilities of Google Gemini to deliver technical insights.
- Enabled users to interactively visualize candlestick charts, apply technical indicators, and trigger AI-generated research narratives by selecting chart segments — simulating an analyst's thought process at scale.

LEADERSHIP & INITIATIVES

Consultant | Worldquant

April 2023 – July 2024

- Engineered alpha strategies targeting inefficiencies in U.S. and Chinese equity markets.
- Achieved a Sharpe ratio of up to 1.87 and returns exceeding 11.75%, with turnover rates maintained under 20% for most alphas.
- Built quantitative models using indicators (RSI, MACD, VWAP, Bollinger Bands) backtested over 10 years of historical data.

UGTA | IIT Roorkee

July 2023 – November 2023

- Worked as an Undergraduate Teaching Assistant for course CEC-101 (Computer Programming).
- Mentored 150+ first-year students, providing guidance on programming fundamentals, conducting lab sessions, and evaluating coding assignments to support academic success.

Treasurer | E-Cell IIT Roorkee

May 2022 – May 2024

- Managed annual budget and financial operations of the largest student-run entrepreneurship bodies on campus.

ACHIEVEMENTS

- NTSE Scholar (AIR 164)
- JEE Advanced (AIR 6461)
- Rank 19 in Alphagrep's Alphaverse league (among all IITs)
- Codeforces Maximum Rating: 1541 ([View Profile](#))
- STSE Scholar (State Rank 165)
- JEE Mains (AIR 13082)
- Rank 555 in International Quant Championship 2023 (30K participants)
- CodeChef Maximum Rating:-1708 ([View Profile](#))