

Academic Qualifications			
Year	Degree/Certificate	Institute	CPI/%
2023 - Present	B.Tech	Indian Institute of Technology Kanpur	7.6/10
2023	ISC(XII)	Sant Gyaneshwar Public School,Delhi	94%
2021	ICSE(X)	Sachdeva Public School,Delhi	93.4%

## Work Experience

**Quant Internship** | *QuantInsti* (Dec'24 - Present)

- Spearheaded research on cutting-edge topics in **quantitative finance**, analyzing **academic papers** to implement novel trading strategies and **advanced financial models** in **Python**.
- Authored insightful **blogs**, translating complex concepts like **statistical arbitrage**, **execution algorithms**, and **machine learning** in trading into accessible resources for aspiring quants.

**Research Consultant** | *World Quant Brain* (Dec'23 - Dec'24)

- Ranked among the top **2000** worldwide in the **International Quant Championship**, earning **gold status** by developing and backtesting **10+** trading strategies with high Sharpe ratios.


## Key Projects

**DREAM 11: Next-Gen Team Builder**  | *Inter-IIT Tech Meet 13.0* (Nov'24-Dec'24)


- Scraped and preprocessed comprehensive datasets** from sources like **Cricsheet** and **ESPN Cricinfo**, transforming raw data into features like Alpha Scores, Consistency Scores, and contextual metrics (weather, pitch, opposition).
- Developed a **Bilateral Ranked Iterative Ensembling (BriTE)** framework, combining regression (**TriBoost**) and classification (**STABOOM**) models, tailored for fantasy team selection across cricket formats (T20, ODI, Test).
- Designed an **intuitive UI** using **SHAP-based explainability** to present predictions with interpretability, ensuring seamless user interaction and real-time insights.

**Skewness in Financial Returns**  | *Prof. Wasim Ahmed | IIT Kanpur* (Sep'24-Present)

- Developed sophisticated volatility models using **Split-normal** and **Split- t distributions** to capture skewness and heavy tails in financial returns, addressing the limitations of traditional Gaussian-based models.
- Applied Bayesian techniques using **PyMC**, including **Gibbs Sampling** and **Metropolis-Hastings**, for efficient posterior estimation in complex models, significantly improving computational performance.

**QuantWeb**  | *Summer project- Finance And Analytics Club, IIT Kanpur* (May'24-July'24)

- Developed a web application using **Django** to deploy a self-curated **backtesting engine** for stock market analysis.
- Implemented **API** calls to fetch the latest market prices of stocks, ensuring **real-time data** for accurate backtesting.
- Designed a user-friendly interface for signup and strategy creation, enabling users to **create trading strategies** and **view detailed backtesting results** for informed decision-making.

**A.T.O.M**  | *Finance And Analytics Club* (July'24 - Aug'24)

- Implemented a user friendly trading bot that can backtest as well as live test on any stock, using **K-means with Dynamic Time Warping (DTW)** on different features like **VIX**, **volume spike**, **ATR** and **RSI** to cluster time series data.
- Implemented different algorithmic strategies using **MACD**, **HMA**, **ADX** and many other technical indicators that get assigned to the time series data according to its cluster during backtesting and live testing.
- Integrated the trading bot with a **gradio** and **Plotly** interface for improvised user experience.

## Technical Skills

- Programming Languages:** C | C++ | Python | HTML/CSS
- Software and Libraries:** Django |  $\text{\LaTeX}$  | Git | Tensorflow | Scikit-Learn | Keras | Pytorch

## Relevant Courses

Fundamentals of Computing	Options 101 by Akuna Capital	Linear Algebra
Machine Learning for Trading by Google Cloud	Introduction to Probability and Statistics	Machine Learning Specialization by Stanford on Coursera

## Positions of Responsibility


**Secretary** | *Finance and Analytics Club* (Mar'24 - Present)

- Leading a **two-tier** team structure comprising of **25** secretaries to foster interest in the domain of electronics and hardware
- Assisted in organising introductory lecture and workshop about finance for **500+** freshers

**Company Coordinator** | *Students' Placement Office, IIT Kanpur* (June'24 - Present)

- Part of a **3-tier team**. Working with **70 fellow Company Coordinators**, under the mentorship of **22 Assistant** and **6 Overall Placement Coordinators**.
- Conduct **Placement** and **Internship Drives** for over **2500** students every year. Responsible for **Inviting Recruiters**, spreading awareness about different roles through Pre - Placement Talks, conducting Technical Tests fairly and smoothly.

## Extra-Curricular Activities

- Ranked among the **top 5** teams at the **FIFS Gameathon**— organized by the Federation of Indian Fantasy Sports (FIFS) featuring a total prize pool of **INR 25 lakhs**.
- Secretary, Humour House:** Conducted various comedy events and also trained freshers for the same
- Gold medal** for a market making strategy based on **Navier Stokes Equation** to model the fair price and quote bid and ask for trades in **Takneek'24**, Intra-IITK Tech Championship. 
- Secured **1st position** in the **ML Trading Track** at **brAInwave'24** sponsored by **Quantra**.