

Vala Yash Vipulbhai

3rd Year Undergraduate
Department of Statistics and Data Science

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Academic Qualifications

Year	Degree	Institute	CPI/%
2021 - Present	B.S. in Statistics and Data Science	Indian Institute of Technology, Kanpur	6.72/10
2021	CBSE(XII)	Modi School, Rajkot	95.6%
2019	GSEB(X)	G.T. Sheth Vidyalavya, Rajkot	83.5%

Achievements

- Bagged **Bronze Medal** in **Inter-IIT Tech Meet 11.0** conducted by IIT Kanpur, in **QuantInsti's** problem statement *[2023]*
- Secured All India Rank **3926** in Joint Entrance Examination Advanced 2021 among **2.5 Lakh** shortlisted candidates *[2021]*
- Secured All India Rank **4218** in Joint Entrance Examination Main 2021 among **12 Lakh** eligible candidates *[2021]*

Work Experience

FundU | *Data Science Intern* (Dec'22 - Jan'23)

Objective	• Developed a ML model to assign badges scores to tags, similar to the system used on the Stack Overflow platform
Approach	• Studied and implemented decision trees and clustering on a random dataset, demonstrating practical ML skills • Created a comprehensive list of 50+ tags to be added to the model for assigning badges and reputation points
Result	• Contributed to enhancing the user experience on by implementing a more engaging and rewarding badge system

Inter-IIT Tech Meet 11.0

Efficacy of Price Action Trading Strategies in the Context of Indian Equities Market | **QuantInsti** (Jan'23-Feb'23)

Objective	• To generate a trading model based on price action trading strategy and backtesting on Blueshift platform
Approach	• Analyzed strategies in the Indian Market, studying 4+ chart patterns such as Head & Shoulders and Engulfing • Succeeded in hypothesis testing to predict the returns of futures by using INDIAVIX and NIFTY50 Futures
Result	• Implemented the hypothesis and achieved returns of over 90% for a 3-year time period with Sharpe Ratio 1.31

Key Projects

AQI Analysis & Pollution Forecasting of Singrauli Coal Fields | *Course Project: EE798Q* (May'23 - Jun'23)

Objective	• To survey real-world time-series data on air pollution caused by open-pit coal mining in the Coal India industry
Approach	• Analysed temporal data using statistical methods and visualization, identified patterns and trends in pollutants • Implemented ARIMA/sARIMA models and successfully estimated NaN values with a high accuracy of 90%
Result	• Validated the impact of blasting on AQI , revealing an increase of 45% in air pollution during the blast period • Achieved a forecasting accuracy of 87% , accurately predicting air pollution levels for a future period of 10 days

ML Applications in Financial Markets

Mentor: Prof. Tushar Sandhan | Course Project: EE798Q

Objective	• To build a model and predict the closing stock price data of next 2 days , on a given sample of past 50 days
Approach	• Studied temporal data analysis, models (RNN , LSTM and GRU) and their application in time series forecasting • Tested LSTM and GRU models on data of past 10 years , and optimized using metrics such as MSE , R2Score
Result	• Implemented the LSTM model and achieved an R2Score of 97.3% and a RMSE less than 1.5% of the mean

Positions of Responsibility

Manager, Alumni Relation | *Outreach Cell, IIT Kanpur* (Apr'23 - Present)

Leadership	• Leading a 3 Tier team of 35+ secretaries collaborated with DoRA office, for smooth conduction of cell activity • Organized 3+ reunions with 1000+ alumni and acted as point of contact for 10+ alumni during campus tours
Initiatives	• Initiated the event Time Capsule in the 56th convocation for the graduating batch receiving 500+ responses • Conducted Open House in 10+ cities to introduce 1000+ students to the culture and academics of IIT Kanpur • Introduced a series of mock interviews by Alums for students, Mock-en-Joy , getting responses from 60+ Alums
Impact	• Facilitated 200+ mock interviews to help students prepare themselves for the upcoming internship drive 2023-24

Secretary, Finance Committee | *Hall Executive Committee, Hall 2, IIT Kanpur* (Mar'23 - Present)

Leadership	• Managing an annual budget of INR 10 lakhs+ for Hall 2 catering to a diverse community of 600+ residents • Elected by 400+ students , representing students on the Finance Committee, contributing to financial decisions
Initiatives	• Secured INR 3 lakhs from Dean's Capital Fund for renovation of guest house and procured new washing machines • Managed a budget of 1 lakh for the Hall 2 in the General Championship 2023, ensuring proper allocation of funds

Technical Skills

- **Programming Languages:** R, Python, C, C++ • **Softwares:** Git, RStudio,
- **Libraries :** Numpy, Pandas, Matplotlib, Statsmodel, Dplyr, Plotly, Ggplot2, Rvest, Keras, Tidyverse

Relevant Courses

Introduction to Probability Theory	Data Science Lab - I & II	Theory of Statistics
Fundamental of Computing	Data Structure and Algorithm	Foundations of Inferential Statistics
Matrix Theory and Linear Estimation	Elementary Stochastic Processes - I	Statistical Computing