Priyanshu Chaurasiya

3rd Year Undergraduate
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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2021 - Present	B.Tech	Indian Institute of Technology, Kanpur	7.1/10
2021	CBSE(XII)	Central Hindu Boys school, Varanasi	89.4%
2019	CBSE(X)	Central Hindu Boys school, Varanasi	90.6%

Scholastic Achievements

- Qualified **Pre Regional Mathematics Olympiad** a prestigious Mathematics Olympiad in 2019
- Secured **1st rank** in India while leading the team representing Finance Club IITK in **CMIE Trading Challenge Competetion**

Key Projects

Time Series Analysis & Forecasting | Self Project | ⚙ Github   (*Apr'23-May'23*)

Objective	• Utilize historical Air Pollution dataset, **impute missing values** in it & **forecast** its future data trends • Develop a **ML model** to accurately predict the **closing price** of a stock, enabling informed investment decisions
Approach	• Plotted the **multi-variate time-series data** and applied diverse techniques like **interpolation, ffill/bfill, and ARMA/ARIMA** for missing value imputation. Plotted the graph to show explicitly the filled missing values • Utilizing the **LSTM model**, a powerful **recurrent neural network**, trained it on a comprehensive historical stock's dataset to analyze temporal dependencies & trends. Employed preprocessing techniques, such as **normalization, scaling**, and **handling missing values**, we optimized the **model's performance** and improved prediction accuracy
Outcome	• Imputed missing values in the dataset & predicted its future values using forecasting techniques **ARIMA/ARMA** • Achieve consistent double-digit **Mean Square Error** (MSE) in predicting the stock's closing price & **directional accuracy** of 100%, which provide valuable insights to improve **investment strategies & financial planning**

Analyzing Firm Performance Outlook leveraging NLP|Mentor: Prof.Harshal Rajan Mulay, IME Dep. IITK ⚙ (*May'23-ongoing*)

Objective	• Analyse annual reports using textual & sentiment analysis techniques for **financial performance** & **corporate culture**
Approach	• The methodology encompassed assessing **readability metrics, lexical diversity, and sentiment analysis** of Management Discussion & Analysis Reports of Nifty 500 companies using **Loughran Mc-Donal Dictionary** • Develop a **deep learning-based dictionary** to enhance the effectiveness of **annual reports** analysis
Outcome	• The project provided valuable insights into financial performance, language usage, sentiment, and **corporate culture** based on the analysis of annual reports which can be utilized to estimate **companies' future growth and potential**

Algo Trading | Finance & Analytics Club, SnT Council | ⚙ Github   (*Dec'22-Jan'23*

- Developed **algorithms** for **trading strategies**: open-high, open-low, high-low, and open-close. Identify potential stocks for trading
- Conducted backtesting of the strategies using the **Zerodha API** Kite connect evaluating their performance and effectiveness
- Achieved favorable returns from the **backtesting**, implemented the strategies and demonstrating their potential for generating profits

Image Processing & Computer Vision | Stamatics IITK | ⚙ Github   (*Apr'23-Jul'23*)

Objective	• Built a **ML model** for **image enhancing, processing and segmentation** to solve real world problems
Approach	• Explored techniques such as **sampling**, **quantization**, **image enhancement**, **edge detection**, and **image segmentation**.Utilized these techniques to manipulate, analyze, and extract meaningful information from images • Devloped ML model that could classify and segment images based on their respective categories using image segmentation
Outcome	• Built a **ML model** for image segmentation achieving optimum accuracy on a large **dataset** containing images of different categories. Attained accurate results in **image enhancement, edge detection, and segmentation**

Positions of Responsibility

Academic Mentor | Counselling Service, IITK   (*Oct'22-Jul'23*)

- Mentored the courses **PHY112 and PHY115** for the batch of 2022 via conducting institute-wide sessions
- Provided ongoing **academic mentorship** to support freshers in their studies, conducting regular sessions prior to important exams
- Collaborated with **counseling service team**, leveraging our collective expertise to conduct the **Orientation Programme** of 2022

Organiser | Design Udghosh'22   (*Jun'22-Oct'22*)

- Designed and created various **promotion materails** such as **posters, banners**, wristbands, participant's IDs, etc for the **festival**
- Contributed to captivating **UDGHOSH'22** promotional materials to promote festival's essence and generate enthusiasm in attendees
- Coordinated with core team in execution of **UNOSQ-Sports Quiz for School Students** for **4000+** students across various cities

Technical Skills

- **Programming Languages :** C++, C, Python, HTML, CSS, SQL, JavaScript, LaTeX
- **Softwares & Libraries:** Git, Pandas, Numpy, Matplotlib, OpenCV, Inventor Professional, Fusion 360, Adobe Illustrator,Canvas

Relevant Coursework

°-ongoing *-online course

Real Analysis and Calculus	Partial Differential Equations	Linear Algebra & ODE	Quantum Physics
Introduction to Electronics	Engineering Graphics	Fundamentals Of Computing	Data Structure & Algorithm *

Extra-Curricular Activities

- Volunteered in **SPO Office** for the 2022-23 placement, managed shortlisting, interviews, & provided regular candidate updates
- Secured **1st rank** while representing my hall 2 in **Takneek'23** a **inter hall tech competition** in Finance Problem statement.