

## Academic Qualifications

Year	Degree/Certificate	Institute	Performance
2023 - Present	B.Tech., Chemical Engineering	Indian Institute of Technology Kanpur	6.70/10
2022	CBSE (XII)	SKP Vidya Vihar, Bhagalpur	95.4%
2020	ICSE (X)	St.Teresa's School, Bhagalpur	96.4%

## Academic Achievements

- Secured **All India Rank 9116** in **JEE (Advanced) 2023** among the 1.80 Lakh shortlisted candidates.
  - Secured **All India Rank 7765** in **JEE (Main) 2023** among 11 lakh candidates from across the country
- 20232023

## Key Projects

Fluroxypyr Production EHS Analysis | CHE261, IIT Kanpur

Feb'25 – Mar'25

- Role: EHS Sub-Team Member
- Conducted detailed Environmental, Health and Safety (EHS) analysis for Fluroxypyr production focusing on hazardous waste streams and safety risks.
  - Designed a complete **Zero Liquid Discharge (ZLD)** treatment system incorporating catalyst recovery, evaporation, and crystallization stages.
  - Calculated sustainability metrics: **Atom Economy (61.58%)**, **E-Factor (0.624)**, **EQ-Factor (1.56)** to evaluate green process efficiency.
  - Studied and documented exposure limits and disposal regulations for chemicals like **Toluene, NaOH, Ethanol, and TBAI**.
  - Co-authored the final technical report including mass balance, regulatory compliance, and safety measures for lab and industrial scale-up.

The Recommendation System | Self Project

Dec'24 - Feb'25

- Built a recommendation system model utilizing collaborative, content filtering, and cross-validation techniques.
- Acquired foundational knowledge in Natural Language Processing (NLP) and libraries such as SciPy and Streamlit
- Planning to deploy the model using Streamlit for the front-end and API handling

Linux System Info CLI Tool | Self Project

Apr'25

- Command-line Tool for System Monitoring
- Developed a command-line tool in Linux to display real-time system information such as CPU, memory, disk usage, and network statistics.
  - Utilized Bash scripting and Linux command-line utilities including **top**, **df**, **free**, and **netstat**.
  - Automated the collection and presentation of system metrics, enhancing efficiency in system monitoring tasks.

ML Kickstart | Association for Computing Activities, IIT Kanpur

May'25 – June'25

- Machine Learning Fundamentals Project
- Completed a hands-on machine learning project as part of the ACA (Association for Computing Activities) ML Kickstart program at IIT Kanpur.
  - Implemented core ML algorithms in Python, including **linear regression**, **classification models**, and **neural networks** using libraries such as **scikit-learn** and **TensorFlow**.
  - Performed **exploratory data analysis (EDA)**, feature engineering, and data preprocessing for real-world datasets.
  - Explored and applied various **activation functions** and evaluated model performance using appropriate metrics.
  - Gained foundational experience in model training, validation, and interpretation of results for both regression and classification tasks.

## Positions of Responsibility

Senior Executive | Udghosh'24, IIT Kanpur

Oct'24

- Managed logistics and coordination for 100+ football participants from multiple colleges.
- Oversaw team registrations, match scheduling, and ground-level execution to ensure smooth conduct of the tournament.
- Acted as the primary point of contact between organizing committee and team captains for football events.

Volunteer | Antaragni'23, IIT Kanpur

Sep'23-Oct'23

- Assisted in the overall campus decoration and thematic setup to enhance the visual appeal of the festival environment.
- Coordinated with the show management team to execute creative decor plans across key campus locations.

## Technical Skills

- Programming Languages:** C, C++, HTML, MATLAB, Python
- Software and Libraries:** Numpy, Pandas, Matplotlib, Scikit-learn, Git, bash, Tensorflow, pacman

## Extra-Curricular Activities

- Occasionally argue with Nietzsche, Kant, Hegel, and Foucault—mostly in my head.
- Record and upload **song covers** of famous Bollywood songs on **YouTube channel** as a hobby