

Arnav Singla

2rd Year Undergraduate
Statistics and Data Science

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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2021 - Present	B.S	Indian Institute of Technology, Kanpur	9.1/10
2021	CBSE(XII)	SGGS SR SEC School, Chandigarh	97.4%
2019	CBSE(X)	ST John's High School, Chandigarh	96.4%

Scholastic Achievements

- Secured **All India Rank 1018** in **JEE Advanced 2021** among the 1.2 Lakh shortlisted candidates.
- Secured **All India Rank 1653** in **JEE Mains 2021** among 9.39 Lakh candidates
- KVPY SX fellowship awardee with an **All India Rank 1474** conducted by Indian Institute of Science, Government of India
- Received the **Academic Excellence Award** for exceptional academic performance in 2021-2022 academic session.

Key Projects

- Deep Learning models for NLP** (Jan'23- Ongoing)
Mentor: Prof. Ashutosh Modi, *Department of Computer Science and Engineering, IIT Kanpur*
 - We are building a model that can communicate using ISL, and we are using natural language processing in order to do so.
 - In order to train the model, we will utilise videos that include Indian Sign Language as well as audio (which will be converted into text using Speech Recognition).
- AQI** (October'22-Ongoing)
Mentor: Prof. Sachchida Nand Tripathi, *Department of Civil Engineering, IIT Kanpur*.
 - Using deep learning models like LSTMs, Bayesian Models, etc., to anticipate the values of PM2.5 in the future using time series data of multiple factors, such as humidity, temperature, PM2.5, etc.
 - Developing a dashboard/website to display real-time air quality data in the states of Bihar and Uttar Pradesh by deploying several low-cost sensors at various sites and computing the PM10 and PM2.5 concentrations

Technical Skills

- Programming Languages:** Python, R, C, C++, HTML
- Software and Libraries:** Pytorch, OpenCV, pyttsx3, pyaudio, pytube, Pandas, matplotlib, ggplot, Seaborn, Scikit-learn, Matplotlib, Git, Excel, NumPy.

Positions of Responsibility

- Secretary, IIT Kanpur Consulting Group** (August'22-present)
 - Using the power of Data Science for community welfare and social good through projects and collaborations with various companies and organizations, by providing efficient and innovative solutions using Deep Learning and Machine Learning.
 - Working on various projects using machine learning(eg. AQI, stated above) and implementing Deep Learning and Natural Language processing.
 - Worked on literature review of many research papers in the field of AI, health care (smart ICU's), Air quality Monitors, etc
 - Involved in a number of national and international competitions, including the Global Management Challenge (Round 2) and the IIMB WhitePaper competition on Sustainability in Operations Management.
- Secretary, Dance Club IITK** (June'22-present)
 - Participated in a number of college-level performances (Thomso'22, IIT Kanpur orientation, etc.)
- Student Guide, Counselling Service Team** (September'22-present)
 - Guided and mentored 5 freshmen students in acclimatizing to the Environment of the Institute.
 - Supervised registration and orientation of 1000+ students assisted by other student guides and coordinators.

Relevant Courses

Statistical Natural Language Processing(ongoing)	Data Science Lab(ongoing)
Matrix Theory and Linear Estimation	Probability and Statistical Theory
Statistical Computing(ongoing)	Elementary Stochastic Processes(ongoing)

Extra-Curricular Activities

- Part of the 2nd Runner up Dance Team in Thomso'22, annual cultural fest of IIT Roorkee.
- Built numerous Neural Networks from scratch in pytorch after researching and learning their inner workings. These models include RNNs, CNNs, LSTMs, Transformers, and many more. (github)
- Thoroughly read the many books on Deep Learning, Like Dive into Deep Learning by arXiv.