

# AMAN JAIN

Senior Undergraduate - Civil Engineering  
Minor in Industrial and Management Engineering  
Indian Institute of Technology Kanpur

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## ACADEMIC QUALIFICATIONS

Year	Degree	Institute	Performance
2019 - 2023	B.Tech Civil	Indian Institute of Technology Kanpur	7.9/10.0
2019	Class XII (CBSE)	DAV Public School, Kota	92.8%
2017	Class X (CBSE)	DAV Public School, Kota	10.0/10.0

## ACHIEVEMENTS

- Offered the full time role of **Associate Data Scientist** by **PayU** during the on-campus placements
- Secured **AIR 3812** in **JEE Advanced 2019** among the 0.2 million successful candidates in JEE Mains
- Secured **AIR 8898** in **JEE Mains 2019** among the 1.2 million aspirants all over the country

## WORK EXPERIENCE

### SURGE IIT Kanpur | Yoga Recommendation System 🔗

Jun'21 – Aug'21

Research Intern, Supervisor Prof Veena Bansal

- Developed an ML-Based Recommendation System for yoga asanas based on benefits sought by the user
- Designed the **ER Diagram** and **Relation Schema** of the database and implemented it using **SQL**
- Created a website using **HTML**, **CSS** and **JavaScript** for the frontend and **Laravel** for the backend
- Integrated an **NLP Model** that predicts the **top 5** yoga asanas out of **226 asanas** with an **accuracy of 87%**

## PROJECTS

### Credit Card Fraud Detection | Self Project 🔗

Jun'22 - July'22

- Developed a model to classify fraud transactions from an **imbalanced dataset** with **0.17% fraud cases**
- Employed algorithms like **Random Undersampling**, **SMOTE** and **ADASYN** to handle class imbalance
- Applied ML algorithms including **Logistic Regression**, **XGBoost** and **Decision Tree**, achieving a **recall of 90%**

### Stock Price Prediction | Self Project 🔗

Feb'21 - Mar'21

- Developed an **LSTM Model** to forecast the stock prices of Big Tech companies for the subsequent week
- Web Scraped data using **Selenium WebDriver** and **BeautifulSoup** and performed exploratory data analysis
- Utilized **ARIMA** as a baseline and **reduced** the **RMSE** of predictions by **30%** using a **Deep Learning model**

### Model Zoo | Programming Club, IIT Kanpur 🔗

May'21 - July'21

- Explored **Deep Learning Models** and implemented them from scratch using **PyTorch** and **TensorFlow**
- Trained **ResNet-34**, **Inception-V1**, **Inception-V3** on CIFAR-10 dataset & achieved **77%**, **85%** & **83% accuracy**

### Escaping The Caves | Course Project, Modern Cryptology 🔗

Jan'21 - May'21

- **Decrypted** classical ciphers such as **Substitution** and **Permutation Ciphers** using frequency analysis
- Designed **chosen plain-text attacks** on **modern cryptographic methods** such as **6 round DES** and **EAEAE**

## TECHNICAL SKILLS

<b>Programming Languages</b>	C++, C, Python, JavaScript, PHP, SQL
<b>Frameworks and Libraries</b>	TensorFlow, PyTorch, Laravel, Pandas, Scikit-Learn, Matplotlib, Numpy
<b>Software and Utilities</b>	BeautifulSoup, Selenium WebDriver, Tableau, Git, L <sup>A</sup> T <sub>E</sub> X, HTML, CSS

## RELEVANT COURSEWORK

\*: ONLINE

- **Computer Science**: Data Structures and Algorithms, Modern Cryptology, Fundamentals of Computing
- **Mathematics**: Applied Probability and Statistics, Linear Algebra and ODE, Computational Methods in Engineering
- **Machine Learning**: Data Mining & Knowledge Discovery, Neural Networks & Deep Learning\*, Sequence Models\*

## POSITION OF RESPONSIBILITY

### Entrepreneurship Cell, IIT Kanpur | Secretary

May'20 - Apr'21

- Assisted in the organization of **Entrepreneurial Extravaganza - India's biggest virtual event (8000+ footfall)**
- Co-organized the first edition of **Entrepreneurial Bootcamp** with the participation of over **500+ enthusiasts**

## EXTRACURRICULAR ACTIVITY

- Built an **ornithopter** in **Aeromodelling Club's** event in **Takneek'19**, the Inter-Hall Championship
- Participated in **Photography Club's** event in **Galaxy'20**, the Inter-Hall Media and Cultural Championship