

# AMAN JAIN

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## EDUCATION

### Indian Institute of Technology Kanpur

B.Tech in Civil Engineering with a Minor in Industrial and Management Engineering

CPI: 8.0/10.0

2023

### DAV Public School, Kota

Class XII CBSE

Percentage: 92.8%

2019

### DAV Public School, Kota

Class X CBSE

CGPA: 10.0/10.0

2017

## ACHIEVEMENTS

- 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

### Programming Languages

C++, C, Python, JavaScript, PHP, SQL

### Frameworks and Libraries

TensorFlow, PyTorch, Laravel, Pandas, Scikit-Learn, Matplotlib, Numpy

### Software and Utilities

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