

Mohd Jeeshan Sheikh

Senior Year Undergraduate

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Education

- Indian Institute of Technology Kanpur, Kanpur (2017-Present)**
Major in Chemical Engg., Pursuing **Minors in Cognitive Sciences and IME** **CPI – 8.1/10.0**
- Lawrence And Mayo Public School, Kota(2015)**
Central Board Of Secondary Education(CBSE), Class 10th **CGPA - 10.0/10.0**
- Lawrence And Mayo Public School, Kota(2017)**
Central Board Of Secondary Education(CBSE), Class 12th **Percentile - 87.8%**

Work Experience

- Udgam DigitalOps, SDE Intern – Summer Internship** **(April'2020 – Aug'2020)**
- Developed Udgam's **Ticket Management System**(Backend) from scratch in **Spring Framework** supporting **REST API** calls.
 - Established** a **JanusGraph** based database capable of storing data for **billions** of users and **scalable** graph data processing for **real-time queries** (Gremlin language) across a **multi-machine cluster**.
 - Incorporated** the database with **Elasticsearch** Index backend (supporting **full-text search**) for **fast data retrieval & analytics**.
 - Embedded** document models at the backend (Java), modelled the data with **9 Mixed Indices** having **Apache Cassandra** as the storage backend.
 - Tech Stack – Apache Tinkerpop, JanusGraph Server database, Cassandra, Elasticsearch, REST API, Spring Boot, Postman, IntelliJ.**

Key Projects

(Online)**

Object Detection in Images using Deep Learning , Kaggle **

- Implemented a **Neural Network** of **Sequential** model with **Dense , Conv2D , Flatten , Dropout** and **MaxPool2D** layers.
- Classified** given fruit images using **categorical labels** and trained the model.
- Achieved an **accuracy of 76.66%** on the validation set with a **cost/loss value of 0.97**.

Hotel Booking Demand Prediction , Kaggle **

- Performed **EDA(Explanatory Data Analysis)** deriving correlations between various factors and **visualized trends**.
- Trained various Machine Learning Models for accurate prediction of hotel bookings at given instants.
- The **Decision Tree Regressor** model **achieved the best accuracy of 76.15%** with **Mean absolute error of 23.84%**

Research Projects

Gold nanoparticle Synthesis for LFIA , Mentored by Prof. Siddhartha Panda

(May'19 - July'19)

- Conducted Experiments on Gold Chloride Trihydrate for their colloidal nanoparticle formation.
- Synthesized stable gold nanoparticles** of size range **18-30 nm**
- Performed **Conjugation of antibodies** on the nanoparticles for strip test
- Affirmative LFIA tests** with **minimized gold consumption**

Molecular Dynamics Simulation of proteins , Mentored by Prof. Harshvardhan H. Katkar

(Jan'20 – June'20)

- Performed Molecular Dynamics Simulation of Mycobacterium smegmatis (**MspA**) using **GROMACS**
- Equilibration, NPT, NVT & MD simulations were done for its symmetric unit as well as its full structure
- C-alpha atoms (1472 CA atoms)** **coarse grained** and a rather stable **Hetero-Elastic Network Model (HENM)** was constructed and simulated using **LAMMPS** (Large-scale Atomic/Molecular Massively Parallel Simulator)

SKILLS

Languages C/C++, Python, HTML/CSS, Java, JS, Gremlin

**Softwares/
Packages** Apache Tinkerpop, IntelliJ, Matlab, Fusion 360, Inventor, Anaconda, Keras, Tensorflow, GROMACS,

Key Courses

Mathematics Probability & Statistics, Linear Algebra, Differential calculus, ODE

ML & Computing Introduction to Machine Learning, Deep Learning, Introduction to Computing, Introduction to Robotics
Data Structures & Algorithms

Positions Of Responsibility

- **Manager (Events), Udghosh' 19** **(May'19 - Sep'19)**
Organizing team member ensuring smooth conduction of events for Udghosh , India's Largest Sports Fest having over **1500** participants.
- **Student Guide| Counselling Service, IIT Kanpur** **(Aug'18 - April'19)**
Helped acclimatization of 6 counselees, part of the organizing team for a week-long freshers' orientation 2018 for **900+** freshers.
- **Senior Executive (Events), Udghosh'18** **(Aug'18 - Oct'18)**
Worked under the organizing team and affluently conducted sports events.