Kunind Sahu | **190110039**
Metallurgical Engineering and Materials Science | **B.Tech.**
Indian Institute of Technology Bombay | **Gender: Male**
DOB: 12/27/2001

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2023	

Pursuing a **Dual Minor** in **Computer Science** and **Artificial Intelligence & Data Science**

Scholastic Achievements

- Currently **Ranked 3rd** in a department of **110+** undergraduates *(2021)*
- Awarded an **AP** grade (**2 out of 114 students**) in the course MM203 : Mechanics of Materials *(2021)*

Research Experience

Graph Similarity Computation | Prof. Miguel Bessa, TU Delft *(May 2021 - Jul 2021)*

- Performed a **literature review** of the present State of the Art in Graph Similarity Computation
- Implemented a **batched** and **parallelized** version of the current State of the Art using **PyTorch Geometric**, replicated its results and **critiqued** the choices of the various layers used by the model
- Carried out fundamental improvements in the feature engineering of the data and the model to achieve an **improvement in performance** over the current State of the Art - **SimGNN**

Key Projects

Financial Fraud Detection | Prof. Biplab Banerjee | Course Project *(Apr 2021)*

- **Visualized** data obtained using **t-SNE** to validate modelling the problem as an **Anomaly Detection**
- Built a **Gaussian Anomaly Detection** model combined with **power transforms** to detect fraud
- Leveraged the power of an **Undercomplete Autoencoder** to learn hidden representations of non-fraud transactions to detect fraudulent ones in an unsupervised manner: **F2 Score - 0.962**, **F1 Score - 0.917**

Analysis of a Marketing Campaign | Prof. Amit Sethi | Course Project *(Nov 2020)*

One of the only 3 projects to receive a perfect grade among 30+ project submissions

- Analyzed **Banco de Portugal's** marketing campaign to **increase client subscriptions** to Term Deposit Accounts and performed **feature engineering** and **hypothesis testing** to determine its key drivers
- Restructured the data by **oversampling of the minority class** to deal with class imbalance, leading to the best results with the Random Forest Classifier : **F1 Score = 0.894** and **Accuracy = 89.41%**

Image Compression using Unsupervised Learning | Self Project *(Jun 2020)*

- Designed and implemented a **K-means Clustering Algorithm** from scratch in Python using **NumPy** and **SciPy** libraries to recreate a user given image with the **best 16 colours** possible
- Achieved a **compression** of the image by approximately **6 times** as compared to the original size

Positions of Responsibility

Teaching Assistant | Linear Algebra | Prof. Sudhir Ghorpade *(Mar 2021 - May 2021)*

- Academically mentored **43 freshmen** and took **weekly tutorial sessions** to help with their difficulties

Academic Mentor | Department Academic Mentorship Programme *(May 2021 - Present)*

- Mentoring **8 sophomores**, helping them strike a balance between academics and extra-curriculars whilst liaising with faculty and over **30+** co-mentors in order to smoothen their transition into the department

Team Head | Data Analytics and Visualization Team *(Jun 2021 - Present)*

- Selected on the basis of a rigorous assignment and interviews about teamwork and machine learning skills
- Executed a **2-step** recruitment procedure comprising a programming assignment followed by an interview round to form a team of **11 members** from a pool of **70+ applicants**

Extracurricular Activities

- Bagged **2nd place** in the **Supply-Demand Simulation** Game organized by EnB Club, IITB *(Aug 2019)*
- Awarded **3rd position** in the **Strategy Wars** Competition organized by Finance Club, IITB *(Sep 2019)*
- Successfully completed a course on **Financial Modelling** under Learner's Space by Career Cell, IITB *(Jun 2020)*
- Volunteered as a writer for **ICSE Board Exams 2016** for special needs students of Singhania School *(Apr 2016)*
- Completed a year-long sports programme in **Lawn Tennis**, organized by NSO, IITB *(Aug 2019 - Mar 2020)*