



Mahim Katiha
Industrial Engineering & Operations Research
Indian Institute of Technology Bombay

19I190002
M.Sc.
Gender: Male
DOB: 25-03-2000

Examination	University	Institute	Year	CPI / %
Post Graduation	IIT Bombay	IIT Bombay	2022	8.8
Graduation	University of Delhi	Acharya Narendra Dev College	2019	76.65%
Graduation Specialization: Mathematics				

SCHOLASTIC ACHIEVEMENTS

- Secured **AIR-17** in Mathematics, IIT-JAM with **99.86** Percentile [2019]

KEY PROJECTS

Attentive Normalization for Conditional Image Generation

[Jul'20-Dec'20]

Guide : Prof. P. Balamurugan | Course Project | Tool : Python (TensorFlow)

- Proposed **Attentive Normalization** to capture visual distant relationship during image generation in **convolutional-GAN**
- Composed of **Semantic Layout Learning** and **Regional Normalization** and has a low computational complexity
- Outperforms **SA-GAN (FID-18.65)** in class-conditional image generation task on **ImageNet (128x128)** with **FID-17.84**

Personalized Word Predictor

[Jul'20-Dec'20]

Guide : Prof. Asim Tewari | Course Project | Tool : Python (TensorFlow)

- Made a personalized word predictor by using **LSTM based Recurrent Neural Network**, takes text files as input
- Implemented **4-Gram Accuracy Metric** for testing, **Batch Processing** and **Categorical Cross Entropy** as loss function
- We also made **Marketing Video, Presentation and Brochure** for the **Purpose of Marketing** of our model

Linear Semantics in Generative Adversarial Networks

[Jul'21-Present]

Guide : Prof. Biplab Banerjee | Course Project | Tool : Python (Pytorch)

- Proposed a **Linear Semantic Extractor (LSE)** to extract **image semantics** modeled by **GANs**
- Studied the **class centers** and **cosine similarities** between different classes to provide geometric interpretation of our LSE
- Build applications based on few-shot LSEs: **few-shot Semantic-Conditional Sampling**, **few-shot Semantic Image Editing**

Zero-Shot Text Classification

[Jul'21-Present]

Guide : Prof. Preeti Jyothi | Course Project | Tool : Python

- Leveraging **pre-trained models** learned on large language corpuses and **transfer learning** them on the downstream tasks of **text classification** without learning even a single labeled training instance
- Investigating and implementing two classifier for zero-shot text classification : **TARS classifier** & two **Transformers models**

News Authenticity Detector with Online Learning

Self Project | Tool : Python(SKLearn)

- Proposed a News authenticity detector model using **Tfidf Vectorizer** & **Passive Aggressive Online Learning Algorithm**
- Authenticated ascendancy of **Passive Aggressive Algorithm** over traditional models like KNN, MNB, Logistic Regression
- Achieved accuracy of **94.48%** using Passive Aggressive Model on **Kaggle BBC-News** dataset best among all other models

TECHNICAL SKILLS

- Programming Languages:** Python, Julia, R, HTML
- Optimization Solvers:** AMPL, Gurobi, CPLEX, Couenne
- Softwares:** MS Office, Mathematica, MATLAB, SCILAB
- Scripting Platform:** Latex

KEY COURSES

- Deep Learning - Theory & Practice
- ML for Remote Sensing - II (Ongoing)
- Probability & Stochastic Processes
- Statistical ML & Data Mining
- Foundation of ML (Ongoing)
- Optimization Techniques
- ML for Remote Sensing - I
- Engineering Statistics
- Economics

POSITIONS OF RESPONSIBILITIES

Department Placement Coordinator

[Jul'21-Present]

Institute Placement Team | IIT Bombay

- Streamlined the placement process for **25+ students** in the IEOR Department and addressed their queries
- Smoothly executed the online **resume verification** process for **1600+** students as a part of a team of **55+ DPCs**
- Pitched the skills & projects of the IEOR students to attract companies from different sectors
- Organizing **20+ activities** at department level to improve **preparation** of students for placements

Teaching Assistant, IIT Bombay

[Jul'21-Present]

Course : Operations Analysis | Instructor : Prof. Narayan Rangaraj

- Assisting** in evaluating course work for a batch of **240+** students in coordination with the course instructor and **8 TAs**
- Helping in **framing solution** of **assignments** and **quizzes** of the course

EXTRA CURRICULAR ACTIVITIES

- Attended **Data Visualization Bootcamp** & learned **Data Reading, Data Filtering & Data visualization** using **Excel**
- Learned **Object Oriented Programming, Web Scrapping & GUI development** using Python via course from WnCC