

# MAYUR MANKAR

IISER Bhopal

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## Education

**Indian Institute of Science Education and Research Bhopal**

**2020 – Present**

*BS-MS | Data Science and Engineering*

## Experience

**Indian Institute of Technology Roorkee (under Dr. Neetesh Kumar)**

**Jan 2024 – Present**

*exploreCSR 2023-2024: Google Research Sponsored Mentorship Program*

- Selected among 50 students from 350+ applicants.

**Shiv Nadar University (under Dr. Sandeep Sen)**

**May 2023 - July 2023**

*INSA-IASc-NASI Summer Research Fellowship Program*

*GitHub*

- 3D Point Cloud Semantic Segmentation of Indoor Scenes using Few-shot Learning
- Proposed an improved version of attention-aware multi-prototype transductive inference (attMPTI) method for few-shot point cloud semantic segmentation.
- Presented this work at IndoML 2023 at IIT Bombay.

**Indian Institute of Technology Patna (under Dr. Sriparna Saha)**

**Dec 2022 - Jan 2023**

*Winter Internship*

- Explaining Stereotypes behind Cyberbullying Memes via Knowledge Enhanced Text Generation
- Hindi-English code-mixed memes are collected from various social media websites. Annotation is done by writing text present in each meme and classifying them as bully/non-bully, then the stereotype behind memes in bully category are manually labeled.
- Further, a multimodal framework is used to generate stereotypes from both image and text label as input.

## Projects

**Balanced MSE for Imbalanced Visual Regression | Dr. Vinod Kurmi**

**Feb 2023 - April 2023**

- Reproduced all the results of the paper. In the process, some bugs in the code were fixed.
- The whole analysis is done on new dataset (AgeDB). Also, two new loss functions are introduced namely sMAPE and logcosh.

**Offensive text detection in multilingual text. | Prof. Parthiban Srinivasan**

**Nov 2022**

- Implemented transformer-based models for the detection of offensive text in languages such as Hindi, Tamil, Malayalam, Kannada, and Telugu.
- Conducted experiments on the dataset, providing a comprehensive analysis of performance and errors, thereby establishing a valuable baseline for future comparisons.

**Hate Speech Detection in Marathi on Twitter | Dr. Jasabanta Patro**

**Sept 2022 – Present**

- The scraped and pre-processed tweets have been categorized into distinct sub-classes of hate and non-hate, each with corresponding labels.
- Moreover, we aim to leverage various pre-trained cross-lingual language models as baseline models, with the goal of establishing a benchmark cross-lingual language model for detecting hate speech in Marathi-English code-mixed text.

## Technical Skills

**Programming Languages/Softwares:** Python, R, C++, Stata, MATLAB

**Web Development:** HTML, CSS, Javascript

**Databases:** MySQL, PostgreSQL

**Platforms:** 3DEXPERIENCE, QGIS, FSL, CityEngine, Blender, Cloud Compare

**Operating Systems:** Windows, Linux

**Office automation:** L<sup>A</sup>T<sub>E</sub>X, Word, Excel, Powerpoint

## Relevant Coursework

**Mathematics:** Calculus of One Variable, Linear Algebra, Multivariable Calculus, Discrete Mathematics-I & Probability and Statistics

**Data Science and Engineering:** Data Structure and Algorithms, Machine Learning, Deep Learning, Artificial Intelligence, Natural Language Processing, Computer Vision, Fundamentals of Database Systems, Data Science in practice, Spatial Data Science and Applications, Machine Learning for Biopharma, Data Analysis and Statistics for Geosciences & Applied Accelerated Artificial Intelligence

**Economics:** Econometrics-I, Econometrics-II & Money, Banking and Financial Markets

## Teaching Experience

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**Undergraduate Teaching Assistant:** DSE313-Artificial Intelligence (Dr. Vaibhav Kumar, IISER Bhopal)

## Volunteering and Extra-Curricular

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**Working Team Member:** Student Development Council, IISER Bhopal | Aug 2022 - July 2023

**Student volunteer:** ISMIR 2023 Conference

**Volunteer:** Singularity 2022 (Treasure Hunt Coordinator)