The Fourth Indian Symposium on Machine Learning (IndoML) was hosted at IIT Bombay (in collaboration with IIT Kharagpur) from 21-23 December 2023—the symposium aimed to disseminate state-of-the-art ML research through invited talks from leading experts within India and abroad. The symposium was supported by gracious grants from ACM, Amazon, Vizzhy, DeepMind, Uniphore, OLA, NetWeb technologies, Microsoft, Google, CMIDS, and Merlyn Mind.

IndoML 2023 had 250+ participants from various institutions, such as IIT Kharagpur, IIT Bombay, IIT Delhi, and several state colleges, such as — DAIICT, Jadavpur University, and Ashoka University. Industry representatives from a number of companies, such as Amazon and Vizzhy, participated in the symposium.

The symposium had 16 stellar talks from eminent speakers from across the globe, including Purdue, UCLA, CMU, Virginia Tech, UT Austin, Google, Vizzhy, Amazon, etc., discussing their work in machine learning research. The plethora of topics ranged from Multimodal Generative Models to Fairness and Bias, applications across recommender systems, and health care to summarization. The Sessions were broadly segregated into topics, such as Foundational and Generative Models, Machine Learning, Fairness in AI, Natural Language Processing, and Applications. Industry experts from Amazon conducted panel discussions on Generative AI and delivered several talks, which ranged from identifying bias to conversational assistants, rate card transformers, and multimodal generative models.

The symposium had interesting tutorials from Danish Pruthi from IISC Bangalore on *Watermarking LLM* and Balaraman Ravindran from IIT Madras on Responsible AI. We received over **300 posters,** out of which **59 posters** were selected and presented. We received a huge number of **student travel grant requests, 700,** and we were able to ensure over **200 student travel grants.** This initiative gave students across different institutes of the country exposure and interactions with eminent researchers across the globe, from industry to academia. Several speakers in the student-speaker interaction session discuss research problems and challenges in their Ph.D. journey. Students from various universities presented their posters. Top three posters were felicitated. The symposium had a one-of-its-kind business meeting with the speakers and the organizers where the team planned the future scope of IndoML and tried to carve out a concrete value proposition.

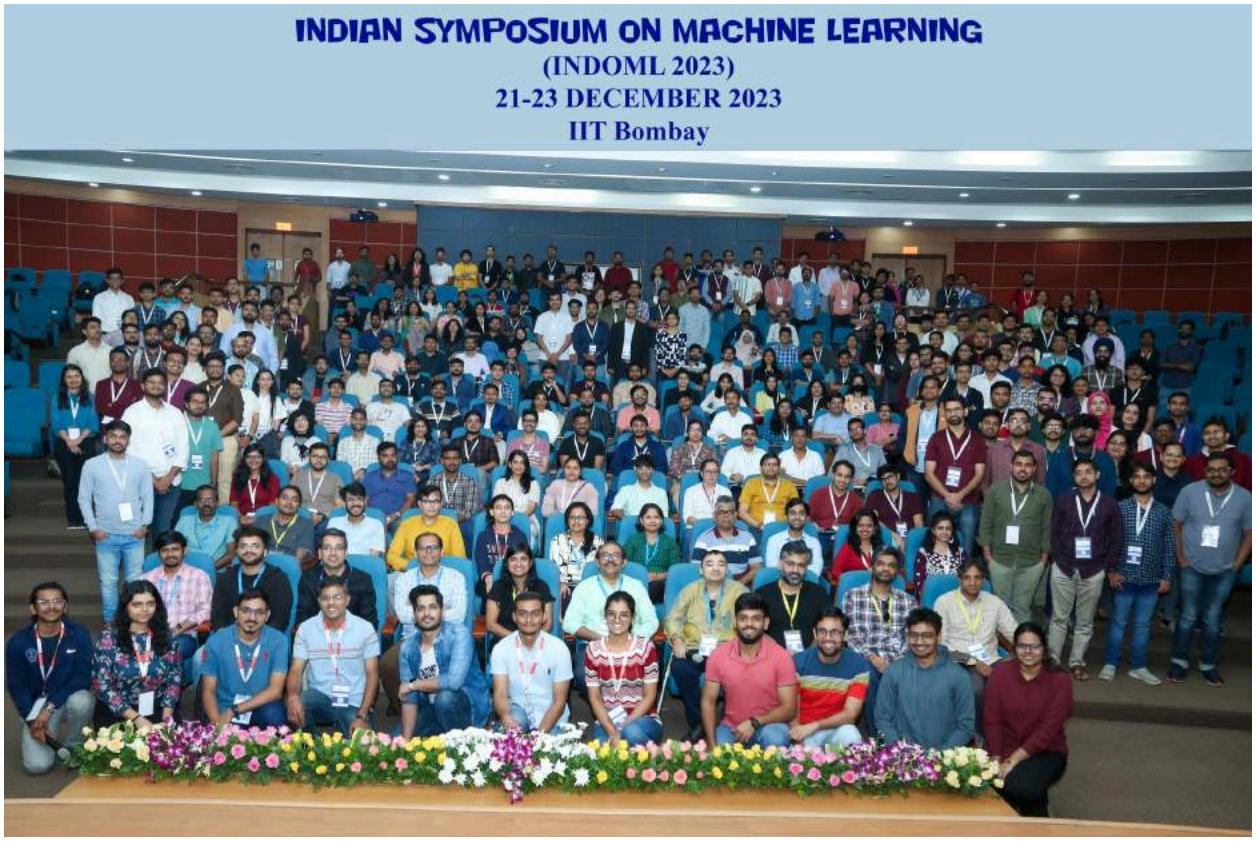
The **Datathon Challenge** was that of **Intent Recognition,** which is a very well-known task in the area of conversational systems. There were **576 teams** across Industry and Academia who participated, **200 registrations** on Codalab, and **53 submissions** in the leaderboard. The participants were spread across both academia and industry! In the span of around 2 months, there were two Ask Me Anything (AMA) sessions and three engaging tutorials on *Intent Detection: From Sesame Street to LLMS* by *Bishal Santra (*IIT Kharagpur*)*, *Bootstrapping Solutions to ML problem* by *Rishi Dey Chowdhury* (ISI Kolkata) and finally by Shubhadip Nag and Abhilash Nandy. The top 5 groups from the leaderboard, working professionals from Uber, and students from ISI Kolkata, IIIT Delhi, and IIIT Allahabad, presented in IndoML 2023. Additionally, three teams (Samaritans), students from Sardar Patel Institute of Technology, IIIT Vadodara, Thadomal Shahani Engineering College and working professionals from Hexaware

Technologies Ltd who were highly active and enthusiastic participants over the entire period of over 2 months were also shortlisted to present.

The three-day symposium ended with a vote of thanks from Prof Biplab Banerjee. IndoML 2024 will be hosted at BITS Pilani, Goa Campus. The recorded talks were streamed live and now can be viewed on YouTube channel: https://www.youtube.com/@IITBombayOfficialChannel

Twitter: https://twitter.com/indoml_sym

Organizers + Volunteers

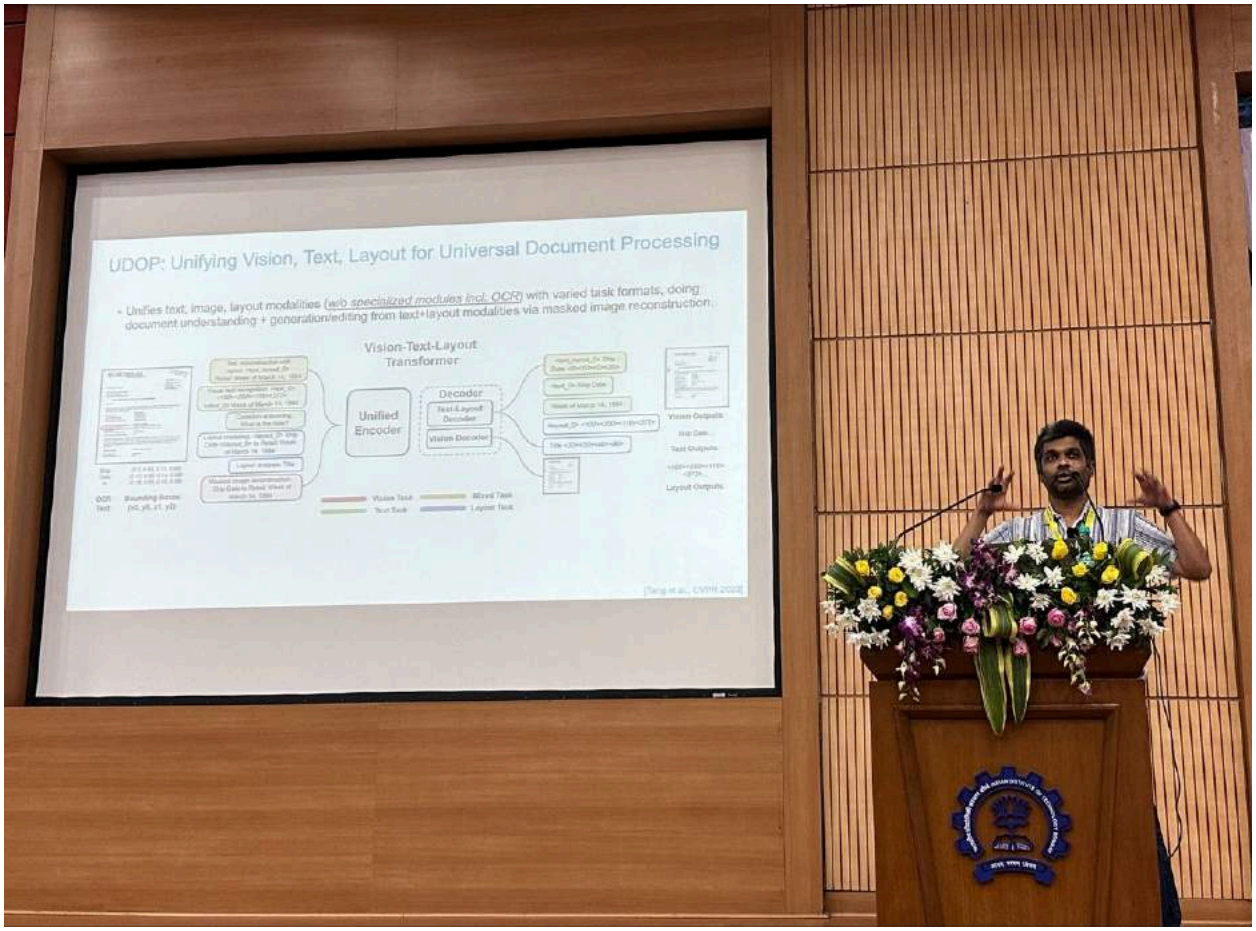


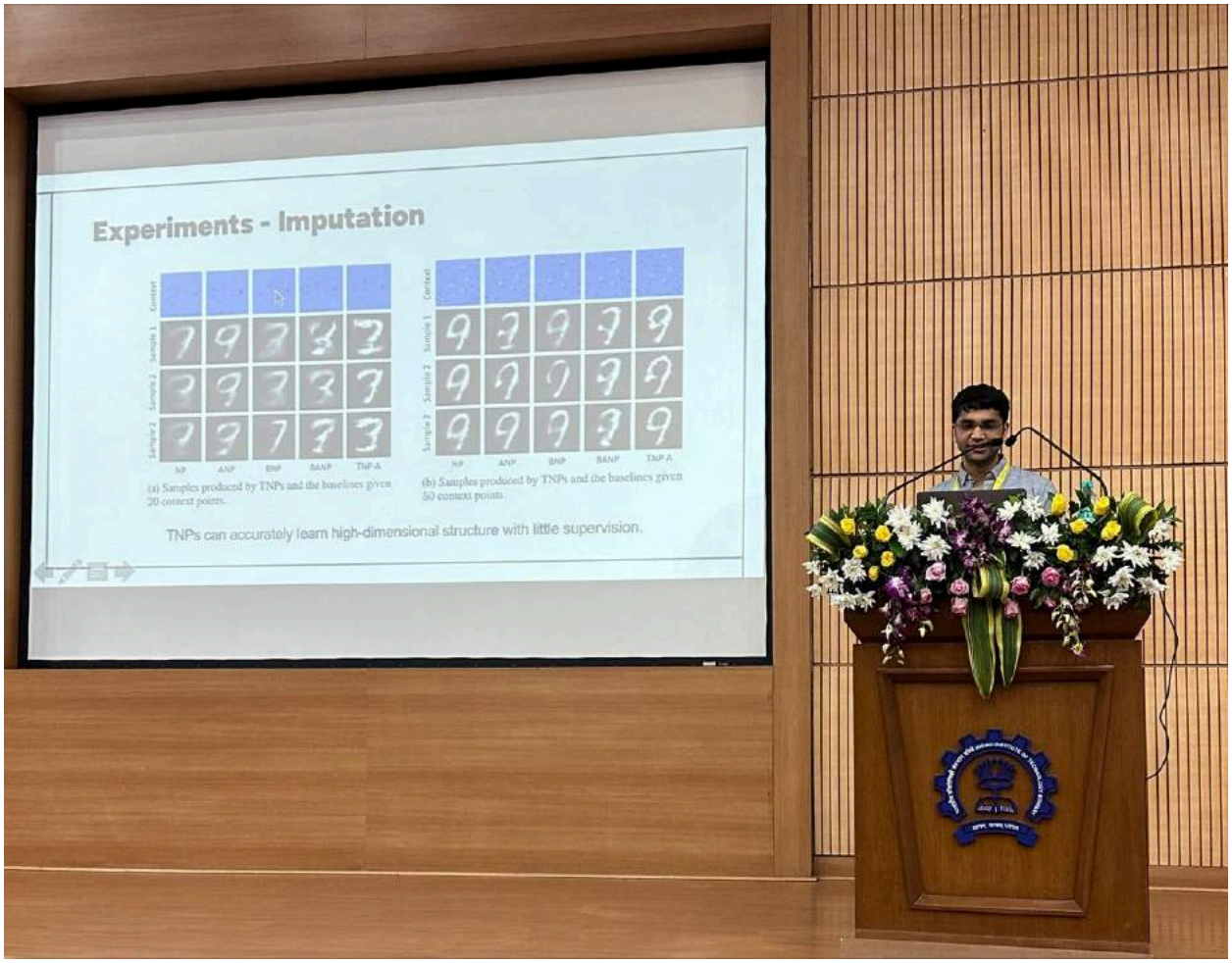
Poster session

Single-Shot Sign Recognition
Overview
Challenges
Proposed Solutions
Effective Connectivity Analysis of Anxiety using Convergent Cross Mapping Technique

Student-Speaker Interactions Photos

Images from talks:




Experiments - Imputation
Context
Sample 1
Sample 2
Sample 3
NP
ANP
BNP
BANP
TNP-A
(a) Samples produced by TNPs and the baselines given 20 context points.
(b) Samples produced by TNPs and the baselines given 50 context points.
TNPs can accurately learn high-dimensional structure with little supervision.