Ansh Poonia

ap2616@cam.ac.uk
https://anshpoonia.github.io

Education

University of Cambridge — Cambridge, England
MPhil in Advanced Computer Science — 2026 - ongoing
- Natural Language Processing, Reinforcement Learning.

School of Engineering, BML Munjal University — Gurugram, India
Bachelor of Technology in Computer Science and Engineering — 2020 - 2024
- GPA: 9.3/10.0, Rank: 1/159.

Publications

1. **Ansh Poonia**. Persona over Fact: Mechanistic Evidence for Knowledge Suppression in LLMs. *under revision*.
2. **Ansh Poonia**, M. Jain. Dissecting Persona - Driven Reasoning in Language Models via Activation Patching. *EMNLP Findings*, 2025.
3. **Ansh Poonia**, M. Kishor, A.K. Prasada Rao. Designing of high entropy alloys with high hardness: a metaheuristic approach. *Scientific Reports*, 2024.
4. M. Jain, **Ansh Poonia**, M. Kishor, A.K. Prasada Rao. Predicting Glass-forming-ability of bulk metallic glasses using Recurrent-Neural-network. *Materials Letters*, 2024.
5. M. Kandavalli, A. Agarwal, **Ansh Poonia**, M. Kishor, A.K. Prasada Rao. Design of high bulk moduli high entropy alloys using machine learning. *Scientific Reports*, 2023.
6. H. Puppala, K. Khatter, M. Dwivedy, **Ansh Poonia**. Urban scan: A novel system to assess the urban landscapes in the regions deprived of street-view services. *MethodsX*, 2023.

Experience

Data Scientist R&D
Kantar Analytics Practice | Chennai, India — 2025.05 - 2026.08
- Implemented a lazy-evaluation computation graph to optimize computation speed by isolating and re-computing only the minimal affected subgraph.
- Optimized function implementation for tensors and runtime devices.

Data Science Intern
Kantar Analytics Practice | Chennai, India — 2024.09 - 2025.05
- Led the development of compiler to transform Bayesian models developed in Stan into PyTorch computational graphs for faster inference.
- Develop multiple forecasting models and aggregators.

Web Development Intern
WaChatty | Gurugram, India — 2023.06 - 2023.07
- Designed a web-based application using JointJS to create chatbots through a flowchart-based interface.
- Implemented Flask-based microservice architecture containerized using Docker.

Data Science Intern
Kantar | Pune, India (Remote) — 2022.06 - 2022.08
- Devised innovative approaches for extracting tabular data from pdf files using regex, and pattern recognition.
- Refactored existing source code files and documentation.

Awards

- **Academic Excellence Medal**, BML Munjal University — 2024.09
- **Merit Scholarship**, BML Munjal University — 2020.10

Bachelor Thesis

Probabilistic Prediction Of Glass Forming Ability Of Bulk Metallic Glasses
Supervisor: A.K. Prasada Rao
Developed and trained Bayesian Hierarchical model using the Metropolis-Hastings algorithm. Investigated uncertainty in the prediction of Critical Diameter.

Assistantship

Prof. A.K. Prasada Rao 2023.02 - 2024.07

- Worked on multiple projects applying machine learning techniques to materials science, resulting in publications in peer-reviewed journals.
- Designed a composition optimization framework utilizing a meta-heuristic search algorithm for faster alloy discovery.

Prof. Kiran Khatter 2022.06 - 2023.03

- Contributed to the development of algorithms for resolving image overlaps and segmenting greenery and sky in urban imagery.
- Developed a program to autonomously generate panoramas from a video.

Leadership Roles

President | *Science and Technology Appreciation Club*

- Organized introductory workshops and quizzes for first-year computer science students.
- Co-organized a workshop on sustainable technological innovation, attended by 150 students.

Research Projects

Automatic Panorama creation from Video

- Created an efficient algorithm utilizing a pre-trained MobileNetV2 to measure the similarity between two consecutive frames by comparing their feature map, surpassing the computational speed of the SSIM approach by a factor of 20.
- Developed a program to autonomously generate panoramic imagery from high-resolution video using the technique outlined in the paper "Automatic Panoramic Image Stitching using Invariant Features;" and created a data-pipeline to sequentially process each frame in order to improve efficiency for low-end devices.

Facebook-Ego Recommender System

- Developed and trained a Graph Neural Network using the SAGEConv architecture on the Facebook Ego dataset to recommend new connections for existing users within a social network graph.
- Trained a binary classifier to determine whether an existing node, based on its aggregated features and those of its neighbors, should be recommended to a new node that lacks any neighbors.