

BHAWNA PALIWAL

PhD student at [Berkeley AI Research](#)

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EDUCATION

University of California, Berkeley

2025 - Present

PhD in Computer Science

Advised by [Prof. Jitendra Malik](#)

GPA: 3.96/4.0

Indian Institute of Technology (IIT), Ropar

2017 - 2021

Bachelor of Technology in Computer Science

Director's Gold Medal

GPA: 9.4/10.0

PUBLICATIONS

CROSS-JEM: Accurate and Efficient Cross-encoders for Ranking

[Bhawna Paliwal](#)*, Deepak Saini*, Mudit Dhawan, Siddarth Asokan, Nagarajan Natarajan, Surbhi Aggarwal, Pankaj Malhotra, Jian Jiao, Manik Varma

ENLSP@Neural Information and Processing Systems (NeurIPS), 2024

[PDF]

HORIZON: A Benchmark for in-the-wild User Behavior Modelling

Arnav Goel, Pranjal A Chitale, [Bhawna Paliwal](#), Bishal Santra, Amit Sharma

Findings of ACL, 2026

LLM-Eval@Neural Information and Processing Systems (NeurIPS), 2025

[PDF]

OAK: Enriching Document Representations using Auxiliary Knowledge for Extreme Classification

Shikhar Mohan*, Deepak Saini*, Anshul Mittal, Sayak Ray Chowdhury, [Bhawna Paliwal](#), Jian Jiao, Manish Gupta, Manik Varma

International Conference on Machine Learning (ICML), 2024

[PDF]

Enhancing Tail Performance in Extreme Classifiers by Label Variance Reduction

Anirudh Buvanesh*, Rahul Chand*, Jatin Prakash, [Bhawna Paliwal](#), Mudit Dhawan, Neelabh Madan, Deepesh Hada, Vidit Jain, Sonu Mehta, Yashoteja Prabhu, Manish Gupta, Ramachandran Ramjee, Manik Varma

International Conference on Learning Representations (ICLR), 2024

[PDF]

Extreme Meta-Classification for Large-Scale Zero-Shot Retrieval

Sachin Yadav*, Deepak Saini*, Anirudh Buvanesh*, [Bhawna Paliwal](#), Kunal Dahiya, Jian Jiao, Manik Varma

Knowledge Discovery and Data Mining (KDD), 2024

[PDF]

NGAME: Negative Mining-aware Mini-batching for Extreme Classification

Kunal Dahiya et al. including [Bhawna Paliwal](#)

International Conference on Web Search and Data Mining (WSDM), 2023

[PDF]

This explains That: Congruent Image–Report Generation for Explainable Medical Image Analysis with Cyclic Generative Adversarial Networks

[Bhawna Paliwal](#)*, Abhineet Pandey*, Abhinav Dhall, Ramanathan Subramanian, Dwarikanath Mahapatra

IMIMIC Workshop, MICCAI, 2021

[PDF]

EXPERIENCE

Microsoft Research

Research Engineer

Sep 2021 - July 2025

Bangalore

· Advisor: *Dr. Manik Varma*

- Worked on efficient language modeling architectures and training algorithm for large-scale systems in search and recommendation.
- My work resulted in publications at ICLR, ICML, and KDD in addition to major tech transfers to Microsoft's production systems.

Monash University

Research Intern

Aug 2020 - Jan 2021

Remote

· Advisor: *Dr. Abhinav Dhall*

- Developed an interpretable deep learning architecture for generating medical diagnosis reports, resulting in a publication at the IMIMIC workshop at MICCAI.
- Led the design and implementation of a multi-modal deepfake detection model, integrating physiological signals with audio and visual modalities to identify counterfeit videos.

Indian Institute of Science (IISc)

Research Intern

May 2019 - July 2019

Bangalore

· Advisor: *Dr. Vijay Natarajan*

- Worked on matrix visualization tools for visualizing large-scale [topological data structures](#).

HONOURS AND AWARDS

- Awarded two US patents for *CROSS-JEM* and *Extreme Meta-Classification for Large-Scale Zero-Shot Retrieval*
- Class of 2021 Director's Gold Medal recipient for best all-round performance in academics, research, and leadership (one awardee out of 250 students)
- Global Rank 2 in CVPR 2021 [workshop challenge on eye gaze detection](#)
- Awarded with Merit scholarship during all 8 semesters at IIT Ropar
- Academic Rank 2 among 250 students at IIT Ropar Class of 2021
- Winner of Smart India Hackathon 2020 organized by MHRD, Govt. of India
- Top 0.1% in Joint Engineering Entrance (JEE) 2017 Exam among 1.3M candidates.

SKILLS

Programming Languages: Python, C, C++, Java, SQL

Libraries and Frameworks: PyTorch, Numpy, HuggingFace, OpenCV, Weights and Biases

RELEVANT COURSEWORK

Robotics and Control: Deep Reinforcement Learning (CS 285), Robots That Learn (CS 294-277), Control Theory (ELENG 221A)

AI: Large Scale Vision and Language Models (CS 294-43), Statistical Learning Theory (CS 281A)

PROFESSIONAL OUTREACH

Presented our work on **Extreme Memory Based Knowledge Models** to [Bill Gates and Microsoft Research India Advisory Board 2024](#).

Volunteer: WiCV (CVPR'21), Microsoft Booth at NeurIPS'22, COLT'23

Reviewer: KDD'24, NeurIPS'24

Mentorship: Coding Club and Debating Society at IIT Ropar