

Pragati Meshram

NATURAL LANGUAGE PROCESSING · COMPUTER VISION · MACHINE LEARNING RESEARCHER

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Education

University of Illinois

PHD STUDENT IN ELECTRICAL AND COMPUTER ENGINEERING

- **Key Courses:** Advanced topics in NLP, Deep Learning for Computer Vision, Computer Vision, Optimization

Urbana-Champaign, USA

Jan. 2024 - Present

Indian Institute of Technology Bombay (IIT Bombay)

MASTER OF TECHNOLOGY (M. TECH.) IN COMMUNICATION AND SIGNAL PROCESSING

Mumbai, India

Aug. 2021 - Dec. 2022

Indian Institute of Technology Bombay (IIT Bombay)

BACHELOR OF TECHNOLOGY (B. TECH.) IN ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Mumbai, India

Aug. 2017 - Dec. 2021

Key Publications

AAAI	Extended VQA for Multi-modal LLMs * submitted to Association for the Advancement of Artificial Intelligence (AAAI)	2024
ISBI	Sample Specific Generalized Cross Entropy for Robust Histology Image Classification IEEE International Symposium on Biomedical Imaging (ISBI)	2021
ECCV	Multi-source open-set deep adversarial domain adaptation European Conference on Computer Vision (ECCV)	2020

* first author publications

Industrial Experience

Uber Technologies Inc

SOFTWARE ENGINEER

Bangalore, India

Aug 2022 - Dec 2023

- Co-led the integration of Tembici vendor services into the Uber app, significantly enhancing our Micro-Mobility offerings
- Streamlined the user experience by unifying station and vehicle tap flows, and enabled easy access to past Micro-Mobility trip receipts, improving overall user convenience
- Mentored a newly onboarded engineer, accelerating their ramp-up on key projects and the codebase

Research Internships and Projects

Hint Generation | University of Illinois, Urbana-Champaign

RESEARCH | GUIDE: DR. SUMA BHAT

Urbana-Champaign, USA

Aug 2024 - Present

- Proposing a novel paradigm for generating hints for math problems using Large Language Models to enhance learning and problem-solving

Navigating to write codes | University of Illinois, Urbana-Champaign

RESEARCH | GUIDE: DR. SUMA BHAT

Urbana-Champaign, USA

Jul 2024 - Present

- Proposing a pipeline leveraging Large Language Models to assist students in writing and improving code effectively.

Open-set modality distillation | IIT Bombay

RESEARCH PROJECT | GUIDE: SUBHASIS CHAUDHURI, BIPLAB BANERJEE

Mumbai, India

Jan 2021 - May 2021

- Dealt with the problem of modality distillation in the absence of bands for the purpose of remote sensing (RS) image classification by exploring the deep generative models
- Proposed an adversarial training capable of learning discriminative feature representation

Face Pose Synthesis | AWL Inc. Japan

RESEARCH INTERN | GUIDE: SRIDHAR BABU

Sapporo, Japan

Jul 2020 - Aug 2020

- Resolved issue of inadequate training data for mask-wearing facial recognition by researching Facial Landmark detection and designing a pipeline for multi-view image generation for both masked and unmasked data
- Developed a face pose synthesis system using advanced GANs, enhancing the robustness of mask-wearing facial image recognition

Packet Routing | Aalborg University, Denmark

RESEARCH INTERN | GUIDE: BEATRIZ SORET

Aalborg, Denmark

May 2020 - Jul 2020

- Simulated packet routing in satellite constellations using Q-Learning and Dijkstra's Algorithm, modeling packet arrival with a Poisson process and incorporating buffering
- Analyzed and compared routing performance based on route complexity, end-to-end packet latency, and average delay

Skills and Responsibilities

Libraries PyTorch • TensorFlow • Tensorboard • Keras • NLTK • OpenAI • OpenCV • Pandas

Languages Python • C • C++ • Assembly • Swift • GO • \LaTeX | **Tools** Docker • Git • MATLAB • SFTP • SSH

Responsibilities Research Assistant • Engineer Mentor 2023