

# Pragati Meshram

NATURAL LANGUAGE PROCESSING · COMPUTER VISION · MACHINE LEARNING RESEARCHER

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## Education

<b>University of Illinois, Urbana-Champaign (UIUC)</b>	Urbana-Champaign, USA
GRADUATE STUDENT IN ELECTRICAL AND COMPUTER ENGINEERING	Jan 2024 - Present
• <b>Key Courses:</b> Deep Generative Models, Adv topics in NLP, Computer Vision, Optimization, Computational Inference, Deep Learning for CV	
<b>Indian Institute of Technology Bombay (IIT Bombay)</b>	Mumbai, India
DUAL DEGREE (M. TECH. + B. TECH.) IN ELECTRICAL ENGINEERING	Jul 2017 - Jun 2022

## Key Publications

ICLR	<b>DAWN: Dual Space Regeneration *</b> International Conference on Learning Representations (ICLR), Under review	2025
Arxiv	<b>ElectroVizQA: How well do Multi-modal LLMs perform in Electronics Visual Question Answering? *</b> <a href="https://arxiv.org/abs/2412.00102">https://arxiv.org/abs/2412.00102</a>	2024
ISBI	<b>Sample Specific Generalized Cross Entropy for Robust Histology Image Classification</b> IEEE International Symposium on Biomedical Imaging (ISBI)	2021
ECCV	<b>Multi-source open-set deep adversarial domain adaptation</b> European Conference on Computer Vision (ECCV)	2020

\* first author publications

## Industrial Experience

<b>Uber</b>	San Fransisco, US
PHD RESEARCH INTERN	May 2025 - Aug 2025
• Developed an LLM-based real-time fraud detection model to identify anomalous earner behavior • Built scalable methods to detect edge cases and inconsistencies in large-scale trip and driver data	
SOFTWARE ENGINEER	Aug 2022 - Dec 2023
• Launched Micro-Mobility service across 20+ cities by integrating Tembici vendor services and unifying trip flows • Built engagement analytics, enhanced receipt access, and mentored a new engineer for faster onboarding	
<b>Mercedes-Benz, R&amp;D India</b>	Bangalore, India
COMPUTER VISION INTERN   GUIDE : MEGH SHUKLA	Jul 2021 - Sep 2021
• Worked on Domain Adaptation for Few-shot Action Recognition, focusing on recognizing action classes with limited source samples using a Prototype-centered Attentive Learning (PAL) model • Implemented a prototype-centered contrastive learning loss to enhance data efficiency and a hybrid attentive learning mechanism to handle outliers and class overlap, moderate performance gains on standard few-shot action benchmarks	
<b>AWL Inc.   Face Pose Synthesis</b>	Sapporo, Japan
RESEARCH INTERN   GUIDE: SRIDHAR BABU	Jul 2020 - Aug 2020
• Mitigated training data scarcity in masked face recognition by designing a multi-view image generation pipeline for masked and unmasked faces • Developed a face pose synthesis system using advanced GANs, enhancing the robustness of mask-wearing facial image recognition	

## Research Internships and Projects

<b>Vision-Language Model Performance Enhancement   UIUC</b>	Urabna-Champaign, USA
RESEARCH   GUIDE: PROF. HENG JI	Aug 2024 - Present
• Enhancing VLM performance by employing ensemble learning, visual grounding techniques to improve feature extraction	
<b>Packet Routing   Aalborg University</b>	Aalborg, Denmark
RESEARCH INTERN   GUIDE: PROF. BEATRIZ SORET	May 2020 - Jul 2020
• Simulated and analyzed performance of packet routing in satellite constellations using Q-Learning and Dijkstra's Algorithm	

## Skills and Responsibilities

<b>Libraries</b>	PyTorch • TensorFlow • Tensorboard • Keras • NLTK • OpenAI • OpenCV • Pandas
<b>Languages</b>	Python • C • C++ • Assembly • Swift • GO • $\LaTeX$   <b>Tools</b> Docker • Git • MATLAB • SFTP • SSH
<b>Responsibilities</b>	Research Assistant • Engineer Mentor at Uber (2023)