

Tajamul Ashraf

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Official Address

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MBZUAI, Masdar City
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H-1253, New Colony
Karan Nagar, Srinagar
Kashmir; 190010, India

RESEARCH INTERESTS

I am interested in addressing the challenges faced by Medical AI, image understanding, and object detection tasks, particularly when confronted with cross-domain and Out-Of-Distribution (OOD) scenarios.

EDUCATION

Indian Institute of Technology, (IIT Delhi) New Delhi, India

Master of Science (M.S by Research) in Computer Science June 2024

GPA: 9.28/10.0

Advisor: [Prof. Chetan Arora](#), Co-Advisor: [Prof. \(Dr.\) Krithika Rangarajan](#)

Thesis title: *Domain Adaptation in Breast Cancer Detection from Mammograms.*

National Institute of Technology, (NIT Srinagar) Srinagar, Kashmir

Bachelors of Technology in Information Technology July 2022

GPA: 8.34/10.0

Advisor: [Prof. Janibul Bashir](#)

Thesis title: *Robust DL Models for Analyzing the Impact of Coherent Climatic Factors.*

RESEARCH EXPERIENCE

Mohamed Bin Zayed University of Artificial Intelligence (MBZUAI) Abu Dhabi, UAE

Research Associate II Jan 2025 - Current

Line Manager(s): [Prof. Salman Khan](#) and [Prof. Rao Anwer](#).

- Managing the **BoRG dataset** for studying mitotic processing in brain organoids.
- Expanding dataset annotations for segmentation and cellular event tracking such as mitosis phases.
- Optimizing annotation pipelines to improve accuracy with minimal expert input.

Microsoft Research (MSR) Bangalore, INDIA

Research Intern July 2024 - Dec 2024

Host Advisor(s): [Dr. Mohit Jain](#) and [Dr. Prachi Jain](#).

- Worked on Knowledge Graph-based Information Retrieval with RAG.
- Automated LLM pipelines with a semi-structured knowledge base (SKB) for medical chatbots.

- Introduced **Cataract-MSICS** dataset and proposed a phase-conditioned method with pseudo-labeling for surgical tool segmentation.

AI & Robotics Technology Park, I-Hub (ARTPARK)

Bangalore, INDIA

Visiting Student

Dec 2021 - May 2022

Advisor: [Prof. Raghu Krishnapuram](#).

- Developed an automated washroom cleaning robot **RoboJanitor**.
- Designed robust models for pose estimation, detection, classification, and SLAM.
- Developed 3D pose models and REST APIs for production.

Indian Institute of Science (IISc)

Bangalore, INDIA

Research Intern

Mar 2021 - Sep 2021

Advisor(s): [Prof. S.N. Omkar](#) and [Prof. Balaji Prabu](#).

- Developed a novel human pose comparison model to assist yoga teachers during online classes.
- Utilized BlazePose to accurately mark key points of both teachers and students during live sessions.
- Designed a feedback mechanism to compare poses and provide real-time corrections to students.

WORK EXPERIENCE

LEENA AI

Remote(WFH), USA

Software Developer I

May 2022 - Oct 2022

Line Manager: [Anand Prajapati](#)

- Executed full stack software development for the Product and ML team.
- Worked on cross-functional projects, architecting solutions to meet client requirements.

BSNL ALTTC

Delhi, INDIA

Cybersecurity Trainee

Jan 2019 - Mar 2019

Line Manager: [R.K. Pandit](#)

- Troubleshooted and resolved network issues related to Wi-Fi, bluetooth.
- Implemented security measures and optimized network performance in wireless environments.

PUBLICATIONS

(* indicates joint first authors, + indicates my role as mentor)

P6 *D-MASTER: Mask Annealed Transformer for Unsupervised Domain Adaptation in Breast Cancer Detection from Mammograms*. [Code](#) [Paper](#).

Tajamul Ashraf, Krithika Rangarajan, Mohit Gambhir, Richa Gauba, Chetan Arora

MICCAI (Medical Image Computing and Computer Assisted Intervention) 2024.

P5 *HF-Fed: Hierarchical based customized Federated Learning Framework for X-Ray Imaging*.

[Code](#) [Paper](#).

Tajamul Ashraf, Tisha Madame

MICCAI Workshop (Deep-Brea3th:Deep Breast Workshop on AI and Imaging for Diagnostic and Treatment Challenges in Breast Care) 2024. **Best Student Paper Award!**

- P4 *TransFed: A way to epitomize Focal Modulation using Transformer-based Federated Learning.*
[Code](#) [Paper](#).
Tajamul Ashraf, Fuzayil Mir, Iqra Altaf Gillani
WACV (IEEE/CVF Winter Conference on Applications of Computer Vision) 2024.
- P3 *PoseWatch: Advancing Real-Time Human Pose Tracking and Juxtaposition with Deep Learning.*
[Paper](#).
Tajamul Ashraf, BV Balaji Prabu, OS Jois Narasipura
CVIP (Computer Vision and Image Processing) 2023.
- P2 *Climate Change Parameter Dataset (CCPD): A Benchmark Dataset for Climate Change Parameters in Jammu and Kashmir.* [Paper](#).
Tajamul Ashraf, Janibul Bashir
ICDSA (International Conference on Data Science and Applications) 2023.
- P1 *An integral computer vision system for apple detection, classification, and semantic segmentation.*
[Code](#) [Paper](#).
Tajamul Ashraf, Nair Abbas, Mohammad Haseeb, Nadeem Yousuf, Janibul Bashir
ICMV (International Conference on Machine Vision) 2022.
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TEACHING and ACADEMIC SERVICES

Teaching Assistant | Indian Institute of Technology, Delhi

- Computer Vision (COL780) | Spring 2024 with [Prof. Chetan Arora](#)
- Computer Vision for Robotics (JRL780) | Spring 2024 with [Prof. Chetan Arora](#)
- Computer Science Fundamentals and Programming (COL100) | Fall 2023 with [Prof. Chetan Arora](#) and [Prof. Vireshwar Kumar](#)
- Special Topics in Machine Learning (COL870) | Spring 2023 with [Prof. Anurag Mittal](#)
- Data Structures and Algorithms (COL106) | Fall 2022 with [Prof. Naveen Garg](#) and [Prof. Ashish Chiplunkar](#)

Conference Reviewing | Reviewer

- MICCAI'25, 24 | WACV'25, 24 | CVIP'23, 22 | HPEC'23

Conference Volunteer | Organizer

- Serving as a program volunteer for CVIP conference in IIT Jammu, INDIA

Invited Talk | Speaker

- Presented two talks on Research directions, Placements, and Internships to undergrad IT students at the National Institute of Technology Srinagar.

Pilot Mentorship Program | Mentor

- As an alumnus, I mentor bachelor's students from the graduating batches of NIT Srinagar and guide their final project thesis and potential research publications.

Students (* denotes current)

1. [Suhaib Salmani](#)* | 2025

Thesis: Foundational Models and Masked Learning for efficient Medical Object Detection.

2. [Rajes Manna*](#) | 2025
Thesis: Source Free Domain Adaptation using Adversarial Class Aware Teacher.
3. [Asrar ul Haq](#) | 2024
Thesis: Transformer-Based Unsupervised Domain Adaptation in a Federated Setup.

HONORS and AWARDS

- Nominated as Diversity Intern by Microsoft Canada.
- Honorable mention by IIT Delhi for research contributions during my Master's degree.
- Awarded MICCAI 2024 Travel Grant.
- Awarded IIT Delhi Endowment Grant 2024.
- Won India's largest National Entrepreneurship Challenge at IIT Bombay.
- Gold Microsoft Student Learn Ambassador for NIT Srinagar.

TECHNICAL SKILLS

Languages: Python, C, C++, MATLAB, SQL, HTML/CSS, Javascript
Frameworks: PyTorch, TensorFlow, Keras, Scikit-Learn, OpenCV, HuggingFace, Flask
Developer Tools: Git, Docker, VS Code, Visual Studio, PyCharm, Linux

EXTRACURRICULAR and SOCIAL ACTIVITIES

Gold [Microsoft Student Learn Ambassador](#)

Actively promoted technology learning and fostered a community of student developers in Kashmir. Organized workshops, webinars, and hackathons to encourage student innovation and collaboration.

Founder [Ralith Milth](#)

Established an NGO focused on raising awareness and support for drug abuse prevention and rehabilitation. Spearheaded community outreach programs with local organizations to support affected individuals.

Co-founder [AT Talks](#)

Hosting a podcast discussing the intersection of technology and society, featuring expert insights. Managed guest interviews, content strategy, and promotion to grow the podcast's reach and impact.

REFERENCES

Prof. Salman Khan ☒	Prof. Rao Anwer ☒
Prof. Chetan Arora ☒	Prof. Krithika Rangarajan ☒
Prof. Iqra Altaf Gillani ☒	Prof. Janibul Bashir ☒