Tajamul Ashraf

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Research Interests

My research focuses on integrating computer vision with medical AI and information retrieval. Specifically, I am interested in developing advanced computer vision systems with applications in medical imaging, autonomous driving, and AI-driven solutions for real-world scenarios.

EXPERIENCE

Microsoft Research

Bangalore, India

Research Intern (Full-time)

July 2024 -current

- o Knowledge Graph-based Information Retrieval: Retrieval Augmented Generation (RAG).
- Working on Medical Chatbots: Designing a semi-structured knowledge base (SKB) using LLMs.

Delhi, India

Software Engineer (Full-time)

May 2022 - Oct 2022

- $\circ\,$ Product, Engineering & ML team: Executed full lifecycle softwares.
- Worked in cross-functional projects.: Architected the solutions to meet client requirements.

Artpark

Bangalore, India

Computer Vision Intern (Full-time)

Dec 2021 - May 2022

- o Thesis topic: Robojanitor- Developed a fully automated washroom cleaning robot
- Pose Model with REST API for Production: Developed 3D pose models and REST APIs for production.
- Automated Pipelines: Created pipelines using Airflow.
- CI/CD: Successfully implemented CI/CD flows on Gitlab.

Indian Institute of Science

Bangalore, India

Research Intern (Full-time)

Mar 2021 - Sep 2021

- o Developed a novel human pose comparison model: Aided yoga teachers during online classes with training
- o Blaze Pose: To mark the key-points of both teacher and students and compares both and instructs the students according to the teacher.

BSNL, Advanced Level Telecom Centre

UP, India

Cyber Security and Networking Intern (Full-time)

Jan 2019 - Jun 2019

o Troubleshooting and solving network problems: Wireless technologies (such as Wi-Fi, Bluetooth) and security

EDUCATION

Indian Institute of Technology Delhi

New Delhi, India

Masters in Computer Science, MS(Research)

2022 - 2024

Thesis: Unsupervised and Source-Free Domain Adaptation in Breast Cancer Detection using Mammograms.

Courses: Computer Vision, Machine Learning, Special Topics in ML, Deep Learning, Natural Language Processing, Ethics in CS

National Institute of Technology Srinagar

Kashmir, India

Bachelor of Technology - Information Technology, CGPA: 8.34

2018 - 2022

Thesis: Robust Deep Learning Models for Analyzing the Impact of Coherent Climatic Factors on Climate Change.

Courses: Operating Systems, Data Structures, Analysis Of Algorithms, Artificial Intelligence, Machine Learning, Networking, Databases

SKILLS

- Domains: Computer Vision, Machine Learning, Information Retrieval, Domain Adaptation, Medical Imaging.
- Languages: Python, C++, JavaScript, Bash, HTML/CSS.
- Frameworks: Pytorch, OpenCV, TensorFlow, Keras, Django, Flask, Flutter.
- Tools: Airflow, Docker, GIT, MySQL, SQLite.
- Soft Skills: Leadership, Event Management, Public Speaking.
- Initiatives: Founder Ralith Milth (NGO on drug abuse), AT Talks (Podcast discussing technology and society.)

SELECTED PUBLICATIONS 3

- Conference: Tajamul Ashraf, Krithika Rangarajan, Mohit, Richa, Chetan Arora, D-MASTER: Mask Annealed Transformer for Unsupervised Domain Adaptation in Breast Cancer Detection from Mammograms, MICCAI 2024. [Link]
- Conference: Tajamul Ashraf, Tisha Madame, HF-Fed: Hierarchical based customized Federated Learning Framework for X-Ray Imaging, MICCAI Workshop 2024. [Link]
- Conference: Tajamul Ashraf, Fuzayil-bin-Afzal Mir, Iqra Altaf Gillani TransFed: A way to epitomize Transformer based Focal Modulation using Federated Learning, WACV 2024. [Link]
- Conference: Tajamul Ashraf, Balaji Prabu BV, and Omkar S. J Narasipura, Pose Watch: Advancing Real Time Human Pose Tracking and Juxtaposition with Deep Learning, CVIP 2023. [Link]
- Conference: Tajamul Ashraf, Naiyer Abbas, M. Haseeb, Nadeem, Janibul Bashir, An Integral Computer Vision System for Apple Detection, Classification, and Semantic Segmentation, ICMV 2022. [Link]

LANGUAGES

• English (C2), Kashmiri (Native), Urdu (C2), Hindi (C1), French (A2, Arabic (B1)