Anshul Shah

anshulbshah.github.io

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Education

Johns Hopkins University **2020–Present**
Ph.D in Computer Science
Advisor : Prof. Rama Chellappa
Transferred from UMD College Park

University of Maryland, College Park **2018–2020**
M.S. in Computer Science *4.0/4.0*
Advisor : Prof. Rama Chellappa

Indian Institute of Technology Madras, Chennai **2013–2018**
B.Tech.(Honors) & M.Tech. in Electrical Engineering *9.39/10*
Minor in Robotics
Advisor : Prof. A.N. Rajagopalan

Czech Technical University in Prague **Fall 2016**
Department of Electrical Engineering
Semester Abroad

Research Interests

Contrastive Learning, Self-Supervised learning, Multi-Modal representations, Pose-based Action Recognition

Selected Achievements

- **Amazon Fellow (2022-23)** : Named Amazon Fellow as a part of JHU + Amazon initiative for Interactive AI.
- **Student Scholarship - AAAI'22** : Received Student Scholarship for AAAI-2022.
- **Highlighted reviewer ICLR'22** : Recognized as highlighted reviewer for ICLR'22.
- **Rank 2** : Ranked 2nd in Dual Degree (B.Tech+M.Tech) in Electrical Engineering at IIT Madras (Batch of 2018).
- **Department Topper 2015-16** : Awarded the Kolluri Memorial Prize for **best Academic record** in Electrical Engineering at IIT Madras in 3rd Year with a GPA of 9.75.

Publications and Patents

Max-Margin Contrastive Learning
Anshul Shah[†], *Suvrit Sra, Rama Chellappa, Anoop Cherian*[†]
AAAI 2022

Pose and Joint-Aware Action Recognition
Anshul Shah, *Shlok Mishra, Ankan Bansal, Jun-Cheng Chen, Rama Chellappa, Abhinav Shrivastava*
WACV 2022

Few shot Learning with hard Mixup
Aniket Roy, ***Anshul Shah****, Ketul Shah, Prithviraj Dhar, Anoop Cherian, Rama Chellappa*
NeurIPS 2022

Bringing Alive Blurred Moments
Kuldeep Purohit, ***Anshul Shah****, A N Rajagopalan*
CVPR 2019 **(Oral Presentation)**

Multi-View Action Recognition using Contrastive Learning
Ketul Shah, ***Anshul Shah****, Chun Pong Lau, Celso de Melo, Rama Chellappa*
WACV 2023

Learning Visual Representations for Transfer Learning by Suppressing Texture
Shlok Mishra, ***Anshul Shah****, Ankan Bansal, Abhinav Shrivastava, Abhishek Sharma, David Jacobs*
BMVC 2022

Learning Based Single Image Blur Detection and Segmentation
Kuldeep Purohit, ***Anshul Shah****, A N Rajagopalan*
ICIP 2018

Attention Driven Vehicle Re-identification and Unsupervised Anomaly Detection for Traffic Understanding
Pirazh Khorramshahi, Neehar Peri, Amit Kumar, ***Anshul Shah*** *and Rama Chellappa*
NVIDIA AI City Challenge Workshop at CVPR 2019

Hybrid virtual and physical jewelry shopping experience
Mohit Jain, Pratyush Kumar, Megha Nawhal, Ashok Pon Kumar, ***Anshul Shah****, Gyanendra Sharma, Amith Singhee*
Patent US10810647B2

Preprints and Ongoing Works

Multi-Cue processing of Unlabeled Complex Task Videos
Anshul Shah*, Ben Lundell, Harpreet Sawhney, Rama Chellappa*
Under submission

Object-Aware Cropping for Self-Supervised Learning
Shlok Mishra, ***Anshul Shah****, Ankan Bansal, Abhyuday Jagannatha, Abhishek Sharma, David Jacobs, Dilip Krishnan*
Under Submission, arXiv

† Equal Contribution

Research Internships

Microsoft Research : Mixed Reality **Jun'22-Present**
Mentors : Dr. Harpreet Sawhney, Dr. Ben Lundell *Multimodal Fusion*

Microsoft Research : Mixed Reality **Jun'21-Aug'21**
Mentors : Dr. Harpreet Sawhney, Dr. Bugra Tekin, Dr. Amol Ambardekar *Multimodal Complex Video Understanding*

Mitsubishi Electric Research Laboratories (MERL), MA **Jun'20-Aug'20**
Mentor : Dr. Anoop Cherian *Contrastive Learning & Video Representation Learning*

IBM Research Lab, India **May'16-Jul'16**
Mentors : Prof. Pratyush Kumar, Ashok Ponkumar, Dr. Amith Singhee *Virtual Cognitive Mirror*

Matrix ComSec R&D, India **May'15-Jul'15**
Surveillance Camera Video Enhancement

Teaching and Mentoring Experience

Course Assistant **Aug'22-Dec'22**
Machine Perception *Johns Hopkins University*

Teaching Assistant **Jun'17-May'18**
Image Signal Processing & Physics I *IIT Madras*

Project Mentor **Aug'15-Jan'16**
Centre for Innovation *IIT Madras*

Voluntary Service

Reviewed for ICLR'23, AAAI'23, NeurIPS'22, ICLR'22, WACV'22, NeurIPS'21, ICML'21, AAAI'21, NeurIPS'20, ECCV'20, AAAI'20

Relevant Coursework

Computer Vision and Machine Learning: Image Understanding, Advanced Techniques in Visual Learning and Recognition, Image Signal Processing, Deep Learning, 3D Computer Vision, Machine Learning for Computer Vision, Computational Lingusitics, Algorithms in Machine Learning : Guarantees and Analyses
Mathematics: Advanced Numerical Optimization, Convex Optimization, Probability, Statistics and Stochastic Processes, Linear Algebra and Numerical Analysis, Functions of several variables