

# Anshul Shah

anshulbshah.github.io

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## Education

<b>Johns Hopkins University</b> <i>Ph.D in Computer Science</i> Advisor : Prof. Rama Chellappa Transferred from UMD College Park	<b>2020–Present</b>
<b>University of Maryland, College Park</b> <i>M.S. in Computer Science</i> Advisor : Prof. Rama Chellappa	<b>2018–2020</b> 4.0/4.0
<b>Indian Institute of Technology Madras, Chennai</b> <i>B.Tech.(Honors) &amp; M.Tech. in Electrical Engineering</i> Minor in Robotics Advisor : Prof. A.N. Rajagopalan	<b>2013–2018</b> 9.39/10
<b>Czech Technical University in Prague</b> <i>Department of Electrical Engineering</i> Semester Abroad	<b>Fall 2016</b>

## 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

### Max-Margin Contrastive Learning

**Anshul Shah**<sup>†</sup>, Suvrit Sra, Rama Chellappa, Anoop Cherian<sup>†</sup>  
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

## Preprints and Ongoing Works

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### 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

## Patents

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### Hybrid virtual and physical jewelry shopping experience

Mohit Jain, Pratyush Kumar, Megha Nawhal, Ashok Pon Kumar, **Anshul Shah**, Gyanendra Sharma, Amith Singhee  
Patent US10810647B2

## Research Internships

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### Microsoft Research : Mixed Reality

Mentors : Dr. Harpreet Sawhney, Dr. Ben Lundell

**Jun'22-Present**

Multimodal Fusion

### Microsoft Research : Mixed Reality

Mentors : Dr. Harpreet Sawhney, Dr. Bugra Tekin, Dr. Amol Ambardekar

**Jun'21-Aug'21**

Multimodal Complex Video Understanding

### Mitsubishi Electric Research Laboratories (MERL), MA

Mentor : Dr. Anoop Cherian

**Jun'20-Aug'20**

Contrastive Learning & Video Representation Learning

### IBM Research Lab, India

Mentors : Prof. Pratyush Kumar, Ashok Ponkumar, Dr. Amith Singhee

**May'16-Jul'16**

Virtual Cognitive Mirror

### Matrix ComSec R&D, India

**May'15-Jul'15**

Surveillance Camera Video Enhancement

## Teaching and Mentoring Experience

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### Course Assistant

Machine Perception

**Aug'22-Dec'22**

Johns Hopkins University

### Teaching Assistant

Image Signal Processing & Physics I

**Jun'17-May'18**

IIT Madras

### Project Mentor

Centre for Innovation

**Aug'15-Jan'16**

IIT Madras

## Voluntary Service

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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

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**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 Linguistics, 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