Siddharth Katageri

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INTERESTS

3D Computer Vision, Human-Scene Interaction, Representation Learning

EDUCATION

Indian Institute of Information Technology, Hyderabad (IIIT-H) Aug 2021 - Present
Masters by Research, Computer Science and Engineering, GPA: 8.57/10

KLE Technological University, Hubballi Jul 2017 - Jun 2021
B.Eng. in Computer Science and Engineering, GPA: 8.66/10

EXPERIENCE

Indian Institute of Information Technology, Hyderabad (IIIT-H)
Research Fellow - Machine Learning Lab (MLL) Aug 2021 - Present
advised by **Prof. Charu Sharma** and **Prof. Kai Han**

- Working on 3D Computer Vision topics like representation learning in non-euclidean spaces, domain adaptation, and learning human-scene interactions.

KLE Technological University, Hubballi
Research Intern - Center of Excellence in Visual Intelligence (CEVI) Mar 2021 - Aug 2021
advised by **Prof. Uma Mudenagudi**

- Worked on the task of 3D shape decomposition into basic primitive shapes towards improving the performance of various 3D analysis tasks.

Indian Institute of Technology, Delhi (IIT-D)
Project Trainee Jun 2019 - Jul 2019

- Worked with **Prof. Prem Kumar Kalra** and his Ph.D. students on the project "Drilling Effectualness", which was a collaborative project with AIIMS, Delhi.

PUBLICATIONS

Metric Learning for 3D Point Clouds Using Optimal Transport
Siddharth Katageri, Srinjay Sarkar, Charu Sharma
under review

Synergizing Contrastive Learning and Optimal Transport for 3D Point Cloud Domain Adaptation
Siddharth Katageri*, Arkadipta De*, Chaitanya Devaguptapu*, VSSV Prasad, Charu Sharma, Manohar Kaul
Winter Conference on Applications of Computer Vision (WACV), 2024

ABD-Net: Attention Based Decomposition Network for 3D Point Cloud Decomposition
Siddharth Katageri, Shashidhar Kudari, Akshay Gunari, Ramesh Tabib, Uma Mudengudi
International Conference on Computer Vision Workshops (ICCVW), 2021 - StruCo3D

PointDCCNet: 3D Object Categorization Network using Point Cloud Decomposition
Siddharth Katageri, Sameer Kulmi, Ramesh Tabib, Uma Mudengudi
Conference on Computer Vision and Pattern Recognition Workshops (CVPRW), 2021 - WiCV

PAST AND ONGOING PROJECTS

Learning Human-Object Interactions in Real 3D Scenes (*ongoing*)
Summary: We are interested in building systems that comprehend human motion and interactions in 3D environments and are actively working on it.

Vision-Based Techniques to Evaluate Effectualness of Micro Suturing by Trainee Neurosurgeons
Summary: We designed and implemented a vision-based technique for automated evaluation and scoring of the micro-suturing performed by trainee neurosurgeons. This project was done in collaboration with AIIMS, Delhi.

TEACHING AND EVENTS

- Active volunteer in organizing and managing the **3D Vision Summer School** in 2022 and 2023 organized at IIIT Hyderabad. Designed and conducted tutorial sessions on getting started with 3D Vision (slides).
- Active volunteer in managing the **Summer School on AI** in 2023 organized at IIIT Hyderabad.
- Active volunteer in managing **NCVPRIPG-2019**, which was organized at KLE Technological University.
- Active Volunteer in conducting workshops on Image Processing, Machine Learning, and Computer Vision conducted by CVG. (2019, 2020)

CERTIFICATIONS AND ACHIEVEMENTS

- Attended a workshop on 3D Computer Vision at IIIT Hyderabad. (2020)
- Attended CVG Winter Workshop on Image Processing, Machine Learning and Neural Networks.
- Completed multiple courses of *Deep Learning Specialization* authorized by deeplearning.ai, offered through Coursera.
- Won multiple state and national level awards in the Abacus and Mental Math Championship. (*National rank: 65*)

TECHNICAL SKILLS

Languages: Python, C, C++
Framework: PyTorch
Tools: Blender, MeshLab, Git