

# Siddharth Katageri

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


## EDUCATION

- International Institute of Information Technology, Hyderabad (IIIT-H)** Aug 2021 - Aug 2024  
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
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## EXPERIENCE

- **TCS Research, Kolkata**  
*Researcher* - Visual Computing and Embodied AI Nov 2024 - Present  
Working on spatial mapping towards interactable virtual 3D worlds and enhancing user experiences in AR/VR environments. Using technologies like Gen AI, Differentiable rendering, 3D reconstruction, to build solutions that work in real-world scenarios.
- **International Institute of Information Technology, Hyderabad (IIIT-H)**  
*Research Fellow* - Machine Learning Lab (MLL) Aug 2021 - Jul 2024  
advised by **Prof. Charu Sharma** and **Prof. Kai Han**  
Worked on 3D Computer Vision topics like representation learning in non-euclidean spaces, unsupervised 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 like classification and segmentation.
- **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 a medical-related project called “Drilling Effectualness”, which was a collaborative project with AIIMS, Delhi.
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## PUBLICATIONS

- 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, **Oral**
- Metric Learning for 3D Point Clouds Using Optimal Transport**   
**Siddharth Katageri**, Srinjay Sarkar, Charu Sharma  
*Winter Conference on Applications of Computer Vision Workshops (WACVW)*, 2024 - Pretrain 
- 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 
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## 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.
- **3D Object Detection and Tracking in Outdoor LiDAR Scans.**  
Summary: We worked on benchmarking various SoTA methods across multiple datasets for the task of outdoor 3D Object Detection and Tracking, which was a preprocessing step to remove dynamic objects from 3D scans towards building a 3D City Map. This project was carried out under the supervision of **Prof. Avinash Sharma** and **Prof. Charu Sharma**.

- **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.
- **Mesh-Based Cloth Simulation** [↗](#)  
Summary: Implemented and proposed slight upgrades to "Learning Mesh-Based Cloth Simulation with Graph Networks" as a part of a course project at IIIT-H.

## TEACHING AND EVENTS

- An 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 [↗](#)).
- An active volunteer in managing the **Summer School on AI** in 2023 organized at IIIT Hyderabad.
- An 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)

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## 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. (2020)
- 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*)

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## TECHNICAL SKILLS

*Languages:* Python, C, C++

*Framework:* PyTorch, Scikit, OpenCV

*Tools:* Blender, MeshLab, Git, WandB