Navaneet Kadur Lakshminarasimha Murthy

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EDUCATION

PhD August 2019 – Present
University of California, Davis Davis, CA, USA
Advisor: *Dr. Hamed Pirsiavash*
Research: *Self-supervised representation learning, knowledge distillation*

M.Tech (Research) August 2016 – July 2019
Indian Institute of Science Bangalore, India
Advisor: *Prof. Venkatesh Babu*
Research: *3D Reconstruction from single 2D image, Person re-identification*

B.Tech July 2012 – May 2016
National Institute of Technology, Karnataka Surathkal, India
Electrical and Electronics Engineering
Thesis: *Convolutional neural networks for saliency detection in images*

PUBLICATIONS

1. **Navaneet K L***, Pourahmadi, K.*, Koohpayegani, S.A., Pirsiavash, H., "Compact3D: Compressing Gaussian Splat Radiance Field Models with Vector Quantization", 2023 [Webpage][Paper][Code]

2. Koohpayegani, S.A., Singh, A., **Navaneet K L**, Jamali-Rad, H., Pirsiavash, H., "GeNIe: Generative Hard Negative Images Through Diffusion", 2023 [Paper][Code]

3. Koohpayegani, S.A.*, **Navaneet K L***, Pirsiavash, H., "NOLA: Networks as Linear Combination of Low Rank Random Basis", *ICLR*, 2024 [Paper][Code]

4. **Navaneet K L***, Koohpayegani, S.A.*, Sleiman, E.*, Pirsiavash, H., "On The Vulnerability of Efficient Vision Transformers to Adversarial Computation Attacks", CVPR, 2024 [Paper][Code]

5. **Navaneet K L***, Koohpayegani, S.A.*, Tejankar, A.*, Pourahmadi, K., Subramanya, A., Pirsiavash, H., "Constrained Mean Shift Using Distant Yet Related Neighbors for Representation Learning", *ECCV*, 2022 [Paper][Code]

6. **Navaneet K L**, Koohpayegani, S.A., Tejankar, A., Pirsiavash, H., "Regression as a Simple Yet Effective Tool for Self-supervised Knowledge Distillation", *BMVC*, 2021 [Paper] [Code]

7. **Navaneet K L**, Mathew, A., Kashyap, S., Hung, W., Jampani, V., Babu, R.V., "From Image Collections to Point Clouds with Self-supervised Shape and Pose Networks", *CVPR*, 2020 [Paper][Code]

8. **Navaneet K L**, Mandikal, P., Jampani, V. and Babu, R.V., "DIFFER: Moving Beyond 3D Reconstruction with Differentiable Feature Rendering", *CVPR Workshops*, 2019 [Paper][Code]

9. **Navaneet K L***, Mandikal, P.*, Agarwal, M and Babu, R.V., "CAPNet: Continuous Approximation Projection for 3D Point Cloud Reconstruction Using 2D Supervision", *AAAI*, 2019 [Paper][Code]

10. **Navaneet K L**, Todi V., Babu, R.V. and Chakraborty, A., "All for One: Frame-wise Rank Loss for Improving Video-based Person Re-identification", *ICASSP*, 2019 [Paper]

11. Mandikal, P.*, **Navaneet K L***, Agarwal, M.* and Babu, R.V., "3D-LMNet: Latent Embedding Matching for Accurate and Diverse 3D Point Cloud Reconstruction from a Single Image", *BMVC*, 2018 [Paper][Code]

12. **Navaneet K L**, Sarvadevabhatla, R.K., Shekhar, S., Babu, R.V. and Chakraborty, A., "Operator-In-The-Loop Deep Sequential Multi-camera Feature Fusion for Person Re-identification". *IEEE Transactions on Information Forensics and Security*, 2018 [Paper]

13. Mandikal P*, **Navaneet K L***, and Babu, R.V., "Part Segmented 3D Point Cloud Reconstruction from a Single Image", *3DRMS, ECCV Workshop*, 2018 [Paper][Code]

14. **Navaneet K L**, Madhusudana P.C, Suresha P, Periyasamy V, Ghosh P.K., "Multiple Spectral Peak Tracking for Heart Rate Monitoring from Photoplethysmography Signal during Intensive Physical Exercise", *IEEE Signal Processing Letters*, Dec. 2015 [Paper]

* Indicates equal contribution

SKILLS

Languages : Python, C
Frameworks/Tools : PyTorch, TensorFlow, OpenCV, MATLAB, GitHub

SCHOLASTIC ACHIEVEMENTS

- Selected to present PhD research work at CVPR-2024 Doctoral Consortium.
- Awarded 'NetApp Medal for best M.Tech (Research) thesis 2020' for my masters thesis at IISc on deep learning based approaches for single image 3D object reconstruction and person re-identification
- Received University of California, Davis Computer Science 2023 Summer Research Fellowship
- Awarded 'M.Tech Project Award 2017-18' by Robert Bosch Centre for Cyber Physical Systems
- Part of CVPR 2020 'Outstanding Reviewers'. Reviewer for conferences and journals including PAMI, CVPR, ICCV, SIGGRAPH, AAAI, WACV, ACCV, ICPR, IEEE TIFS, IEEE Signal Processing Letters and IET Computer Vision
- Awarded UC Davis GSA Spring Travel Award 2024
- Part of the team placed 4th world wide in the Signal Processing Cup 2015, conducted by IEEE Signal Processing Society
- Won 1st place in Automata-2013 and Automata-2014 and headed the organizing committee of Automata-2015, an image processing based inter-institutional competition in the annual technical fest of NITK

EXTRA CURRICULAR ACTIVITIES

- Tutored 1st year B.Tech students in Electrical Engineering, in a program to help minority students
- Participated in 1st International Convention of SPIC MACAY held at IIM, Calcutta in May 2013
- Won the Best Pitch award in an entrepreneurship event conducted by Entrepreneurs Club, NITK
- Secured 28th position in State level chess competition held in Bangalore in 2007