

Shashanka Venkataramanan

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🏠 Homepage

Github: shashankvkt

Education

2020–2024 **INRIA**

PhD in Computer Science.

Advisors: Yannis Avrithis, Ewa Kijak and Laurent Amsaleg

Publications

- NeurIPS 2023 [S. Venkataramanan](#), E. Kijak, L. Amsaleg, Y. Avrithis, **Embedding Space Interpolation Beyond Mini-Batch, Beyond Pairs and Beyond Examples.**
- CVPR 2022 [S. Venkataramanan](#), E. Kijak, L. Amsaleg, Y. Avrithis, **AlignMixup: Improving Representations By Interpolating Aligned Features.**
- ICLR 2022 [S. Venkataramanan](#), B. Psomas, E. Kijak, L. Amsaleg, K. Karantzas, Y. Avrithis, **It Takes Two to Tango: Mixup for Deep Metric Learning.**
- ECCV 2020 [S. Venkataramanan](#), K-C. Peng, R.V. Singh, A. Mahalanobis, **Attention Guided Anomaly Localization in Images.**
- ICIP 2020 B. McIntosh, [S. Venkataramanan](#), A. Mahalanobis, **Target Detection in Cluttered Environments using Infrared Images.**
- IEEE TIFS 2019 S.P. Mudunuri*, [S. Venkataramanan](#)*, S. Biswas, **Dictionary Alignment with Re-ranking for Low Resolution VIS-NIR Face Recognition.** (* equal contribution).

Preprints

- arXiv 2023 [S. Venkataramanan](#), M. Rizve, J. Carreira, Y. Asano, Y. Avrithis, **Is ImageNet worth 1 video? Learning strong image encoders from 1 long unlabelled video.**
- arXiv 2023 [S. Venkataramanan](#), A. Ghodrati, Y. Asano, F. Porikli, A. Habibi, **Skip-Attention: Improving Vision Transformers by Paying Less Attention.**

Experience

- May 2022 - **Research Intern, Qualcomm AI Research**
Nov 2022 Amsterdam, Netherlands.
- Worked on improving the efficiency of vision transformers.
 - Proposed to approximate the MSA block using a novel parametric function; achieves higher performance in image classification, semantic segmentation, and image and video denoising.
 - Achieved up to 35% on-device reduction in latency on Qualcomm "Snapdragon" 8 Gen.1 Mobile Platform.
- May 2019 - **Research Intern, Siemens Corporate Technology**
Aug 2019 Princeton, USA.
- Worked on detecting and localizing anomalies, such as machine tools in an industrial inspection setting.
 - First to propose supervision on attention maps to localize anomalous regions in an unsupervised setting across industrial inspection, surveillance, and medical imaging applications.
- June 2017 - **Research Fellow, Indian Institute of Science**
June 2018 Bangalore, India.
- Developed re-ranking algorithms using dictionary learning to improve recognition of low-resolution NIR faces.
 - Proposed a cross-modal NIR-VIS dataset comprising human faces captured with variations across pose, illumination and distance from the camera.

Skills

- Languages Python, C/C++)
- Frameworks Keras, PyTorch, Caffe
- Utilities Anaconda, Git, OpenCV, Pandas, NumPy, Scikit-learn, MATLAB, \LaTeX , Sublime Text, Jupyter Notebook