Gagan Kanojia
Research Engineer II, OLA Electric Mobility Pvt. Ltd.

CONTACT INFORMATION

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INTERESTS

Deep Learning, Computer Vision, and Image Processing

EDUCATION

Indian Institute of Technology Gandhinagar May 2015 - June 2020
Ph.D., Electrical Engineering
Research Area: ***Computer Vision*** *and* ***Deep Learning***
Advisor: Dr. Shanmuganathan Raman
CPI : 9.39/10

Indian Institute of Technology Gandhinagar 2010-2014
B.Tech., Electrical Engineering with Minor in Computer Science
CPI : 7.72/ 10

WORK EXPERIENCE

Technical Lead - Computer Vision July 2021 - Present
The Hi-Tech Robotic Systemz Ltd.

- Worked on **obstacle avoidance** and **pallet detection** for autonomous mobile robots.
- Developing **QR-based navigation stack** for autonomous mobile robots.

Research Engineer II August 2020 - July 2021
OLA Electric Mobility Pvt. Ltd.

- Worked on **self-supervised depth estimation** using monocular cameras for autonomous vehicles.
- Worked on computationally efficient solution for **absolute depth estimation** using monocular cameras.
- Worked on **image segmentation** and **object detection** techniques for different business use-cases.

Ph.D. Research Scholar May 2015 - June 2020
Indian Institute of Technology Gandhinagar

- Worked on **detection and removal of moving objects** present in videos or images captured from different view-points.
- Worked on a variety of computer vision related problems like **image classification, action recognition, dynamic object detection** and **depth estimation**.
- Worked with convolutional neural networks, recurrent neural networks and generative adversarial networks.

Senior Software Engineer May 2014 - May 2015
eClerx Services Limited

- Worked on data extraction for specific key attributes from a scanned document.

TECHNICAL SKILLS

Programming Languages: C, C++, Python, MATLAB
Libraries and Scripts: ROS, PyTorch, Tensorflow, OpenCV, Numpy

Awards

The Spotlight Award at Ola Electric Mobility Pvt. Ltd — February 2021

TCS Research Scholarship at IIT Gandhinagar — July 2016 - July 2020

Best Paper Runner-up at NCVPRIPG 2019
Awarded for "Exploring Temporal Differences in 3D Convolutional Neural Networks." at National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG), 2019

The Spot Award at eClerx Services Ltd. — September 2014

Publications

Gagan Kanojia, and Shanmuganathan Raman. "**Learning to Sort Image Sequences via Accumulated Temporal Differences.**" arXiv preprint arXiv:2010.11649 (2020).

Gagan Kanojia, and Shanmuganathan Raman. "**Simultaneous Detection and Removal of Dynamic Objects in Multi-view Images.**" In Winter Conference on Applications of Computer Vision (WACV), 2020.

Gagan Kanojia, and Shanmuganathan Raman. "**MIC-GAN: Multi-view assisted Image Completion using Conditional Generative Adversarial Networks.**" In Twenty Sixth National Conference on Communications (NCC), 2020.

Gagan Kanojia, Sudhakar Kumawat, and Shanmuganathan Raman. "**Attentive spatio-temporal representation learning for diving classification.**" In IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops, 2019.

Gagan Kanojia, and Shanmuganathan Raman. "**Patch-based detection of dynamic objects in CrowdCam images.**" In The Visual Computer 35.4 (2019): 521-534.

Gagan Kanojia, Sudhakar Kumawat, and Shanmuganathan Raman. "**Exploring Temporal Differences in 3D Convolutional Neural Networks.**" In National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG), 2019. (**Best Paper Runner-up Award**)

Gagan Kanojia, and Shanmuganathan Raman. "**DeepImSeq: Deep image sequencing for unsynchronized cameras.**" In Pattern Recognition Letters 117 (2019): 9-15.

Gagan Kanojia, and Shanmuganathan Raman. "**Postcapture focusing using regression forest.**" In IEEE Signal Processing Letters 24.6 (2017): 751-755.

Gagan Kanojia, Sri Raghu Malireddi, Sai Chowdary Gullapally, and Shanmuganathan Raman. "**Who Shot the Picture and When?.**" In International Symposium on Visual Computing, pp. 438-447. Springer, Cham, 2014.

Gagan Kanojia, and Shanmuganathan Raman. "**FacialStereo: Facial depth estimation from a stereo pair.**" In Computer Vision Theory and Applications (VISAPP), 2014 International Conference on, vol. 3, pp. 686-691. IEEE, 2014.