# Shashanka Venkataramanan

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## EDUCATION

**Master of Science, Computer Science** *Aug 2018 - Aug 2020*
University of Central Florida, USA CGPA : 3.8/4.0

**Bachelor of Engineering, Electronics and Telecommunication** *July 2013 - May 2017*
University of Mumbai, India CGPA : 8.13 /10.0

## RESEARCH & INDUSTRIAL EXPERIENCE

***Deep Learning Intern,* Siemens Corporate Technology, USA** *May 2019 - August 2019*

- Developed algorithms using guided attention techniques for anomaly detection and localization using unsupervised and weakly-supervised approaches.

***Junior Research Fellow,* Indian Institute of Science, India** *June 2017 - June 2018*

- Developed re-ranking algorithms using dictionary learning to address low-resolution heterogeneous face recognition across variation in pose and illumination.

***Research Intern*, Robotics Research Lab, IIIT-Hyderabad, India** *Dec 2016 - Feb 2017*

- Developed detection algorithms for multi-robot SLAM on HUSKY UGV with April tags using ROS.

***Intern,* Flytbase Inc., India** *Jun 2016 - Aug 2016*

- Developed and tested detection and tracking algorithm for fast moving targets on a quad-rotor.

## PUBLICATIONS

- **S. Venkataramanan**, R.V. Singh, K-C. Peng, *Anonymous*, International Conference on Learning Representation (ICLR), 2020. [Under review]
- **S. Venkataramanan**, P. Tirupattur, A. Mahalanobis, M. Shah, *Anonymous*, Winter Conference on Applications of Computer Vision (WACV), 2020. [Under review]
- S.P. Mudunuri*, **S. Venkataramanan***, S. Biswas, **Dictionary Alignment with Re-ranking for Low Resolution VIS-NIR Face Recognition**, IEEE Transactions on Information Forensics and Security (TIFS), 2019. (* denotes equal contribution)
- S.P. Mudunuri, **S. Venkataramanan**, S. Biswas, **Improved Low resolution heterogeneous face recognition using re-ranking**, National Conference on Computer Vision, Pattern Recognition, Image Processing and Graphics (NCVPRIPG), 2018.

## TECHNICAL STRENGTHS

**Computer Languages** C/C++, Python, HTML, CSS, Shell Scripting
**Software & Tools** MATLAB, LaTeX, Caffe, TensorFlow, PyTorch, OpenCV, ROS.

## NOTABLE PROJECTS

**Sequence-to-sequence video object segmentation using self attention** *Jan 2019 - April 2019*

- Developed an end-to-end deep learning framework involving self-attention using transformers for instance level object segmentation on the YouTube-VOS dataset.

**Real world anomaly detection in surveillance videos** *Sept 2018 - Dec 2018*

- Implemented an LSTM encoder-decoder framework using RGB and optical flow images to predict anomalies in real life surveillance videos.

**Adversarial attacks on face recognition systems using generative models** *May 2018 - Oct 2018*

- Developed a VAE-GAN framework that generates a unique perturbation causing adversarial attacks on face recognition models.

**Shock extraction from schlieren images** *Jan 2018 - March 2018*

- Developed an algorithm to extract shocks from schlieren images using median filters, active contours etc. during research on hypersonics and shockwaves.

**NIR-VIS person re-identification using deep siamese network** *Aug 2017 - April 2018*

- Developed a deep siamese network for person re-identification across NIR and RGB images with variations in pose, illumination and resolution.