Shashanka Venkataramanan

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[Personal Webpage]

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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 mechanism for anomaly detection and localization using Unsupervised and weakly-supervised approaches

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

- Developed Deep Learning & Re-ranking algorithms to address the issue of low-resolution heterogeneous face recognition.

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

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

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

- Developed and tested detection and tracking algorithm for fast moving target on a quad-rotor with a 3-axis gimbal.

PUBLICATIONS

- **S. Venkataramanan**, P. Tirupattur, A. Mahalanobis, M. Shah **Anomaly Detection in Surveillance Videos using Two-stream Network with Feature Aggregation**, *Under Review*, 2019.
- 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*, 2019. (* denotes equal contribution)
- S.P. Mudunuri, **S. Venkataramanan**, S. Biswas , **Improved Low resolution heterogeneous face recognition using re-ranking**, *6th National Conference on Computer Vision, Patter Recognition, Image Processing and Graphics (NCVPRIPG), 2018, India.*

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 Soft Attention *Jan 2019 - April 2019*

- Developed an end-to-end Deep learning architecture involving 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 Optic flow density images to predict anomalies in real life surveillance videos (UCF Crime dataset).

Adversarial attacks for Face recognition using Generative models *May 2018 - Oct 2018*

- Developed a VAE-GAN framework to generate a unique perturbation which generates an adversarial image imperceptible to human eye, capable of fooling Deep networks.

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 Hypersonic and Shockwaves.

NIR-VIS Person Re-identification using Deep Siamese network *Aug 2017 - April 2018*

- Developed algorithms using a Deep Siamese network to recognize a person from the NIR spectrum with the one from VIS spectrum across variations in pose, illumination etc.