

# Syed Ashar Javed

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🌐 stillbreeze.github.io/

🐙 <https://github.com/stillbreeze>

## Education

- 2018 – 2019  **Carnegie Mellon University, Pittsburgh**  
M.S. in Computer Vision (Graduating Dec 2019)
- 2012 – 2016  **Jamia Millia Islamia, New Delhi**  
B.Tech. in Computer Science



## Work Experience

- Jan '19 – Current  **Amazon Lab126**. Student researcher (Capstone)  
– Working with Professor Michael Kaess on online calibration for visual-inertial SLAM and analyzing how changes in the parameters affect the SLAM algorithms.
- Dec '19 – Current  **CMU Machine Learning Dept** Research Assistant  
– Working with Professor Katerina Fragkiadaki on neural programs for language based visual imagination.
- Mar '17 – Apr '18  **CVIT lab, IIIT Hyderabad** Research Assistant.  
– Formulated a self-supervised approach for unsupervised visual grounding of phrases and obtained state-of-art results on multiple datasets. Work presented at NeurIPS workshop 2018 & under review at CVPR 2019.  
– Trained a state-of-art small obstacle segmentation model for autonomous vehicles using as few as 135 frames by exploiting structure in the road scene. Work presented at ICRA 2018.  
– Formulated a Gaussian Process based synthetic data generation scheme and built an online prediction model for real-time video stabilization in virtual camera simulation.
- Jun '16 – Feb '17  **Cube26**. Research Engineer  
– Implemented multiple papers in the neural art domain for real-time stylization of images. Models deployed to tens of thousands of devices.  
– Incorporated object-level contextual information to improve scene classification in CNNs. Work presented at CVPR 2017 workshop.  
– Explored LDA and Bayesian Optimization using GP & Thomson Sampling for recommendation systems.  
– Benchmarked LSTM models for spoken language identification in speech signals obtained from videos.
- Dec '15 – Jan '16  **Servify**. Product Developer  
– Designed the backend architecture and developed server-side APIs on Node.js
- Jun '14 – Jul '14  **Reliance Industries**. Summer Intern  
– Built a vision based fire detection system for open industrial setting.



## Research Papers and Preprints

- 1 Javed, S. A., Saxena, S., & Gandhi, V. (2018). Learning unsupervised visual grounding through semantic self-supervision. *NeurIPS 2018 ViGIL Workshop*.
- 2 Gupta, K., Javed, S. A., Gandhi, V., & Krishna, K. M. (2018). Mergenet: a deep net architecture for small obstacle discovery. *ICRA 2018*.
- 3 Javed, S. A. & Nelakanti, A. K. (2017). Object-level context modelling for scene classification with context-cnn. *CVPR 2017, SUN Workshop*.
- 4 Ahmad, M., Ahmad, F., & Javed, S. A. (2017). Cryptanalysis of an asymmetric image cryptosystem based on synchronized unified chaotic system and cnn. In *Icicc 2017*.

## Key Academic Projects

-  **Event recognition in complex videos using multi stream CNNs**  
Explored fusion techniques for the spatial (static frames) and temporal (stacked optical flow) streams from a CNN as proposed in the two-stream CNN paper by Simonyan et al. Also modeled temporal information in videos using LSTMs.
-  **Understanding the role of context in object recognition**  
Used a conditional random field to model geometric, semantic and spatial context to improve object recognition as done by Rabinovich et al. Also evaluated GIST for global, scene-level priming.

## Skills

- Languages  Python, C, C++ , Javascript, Matlab, SQL, HTML.
- Tools  OpenCV, Tensorflow, Theano, Keras, PyTorch, Numpy/Sklearn, Matplotlib, Django.