BHAVAN A. JASANI

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EDUCATION:

Carnegie Mellon University, School of Computer Science Pittsburgh, PA
M.S. in Robotics | CGPA: 3.89/4.33 *August 2017 – May 2019 (expected)*
Courses: Visual Learning & Recognition, Deep Reinforcement Learning & Control, Computer Vision, Machine Learning

Birla Institute of Technology & Science (BITS), Pilani – K.K. Birla Goa Campus Goa, India
M.Sc. (Hons.) Physics + B.E. (Hons.) Electrical & Electronics Engineering | CGPA: 9.32/10 *August 2011 – 2016*

TECHNICAL SKILLS:

● Python ● TensorFlow ● PyTorch ● OpenCV ● MATLAB ● LabVIEW ● Verilog ● C ● AWS

PROJECTS:

- ***Movie Question Answering*** *(Independent Study under Prof. Deva Ramanan)* May – December 2018
  - Building visual question-answering models based on MovieQA dataset consisting of long movie clips and subtitles. Exploring how useful the videos are and finding text based biases in the dataset and ways to mitigate them
- ***Zero-shot skeleton based action recognition (***course project - Visual Learning & Recognition***)*** April – June 2018
  - Implemented based on relation networks to learn joint semantics between word embeddings of class labels and video features based on spatial temporal graphical convolutional network, for body pose based action recognition on NTU-RGBD dataset
- ***Domain adaptation for image classification: (****course project* **-** Deep Reinforcement Learning) March – May 2018
  - Reinforcement Learning for using the predictions of a source-dataset trained network on the target-dataset as noisy labels, to learning a policy to sample from source-dataset so as to maximize classification accuracy on a small annotated partition of the target-dataset
- ***Adversarial image generation using GAN's (****course project – computer vision****)*** *November 2017*
  - Implemented and trained a generative adversarial network (GAN) for generating adversarial images for CIFAR 10 dataset for black box attacks

EXPERIENCE:

Carnegie Mellon University, Robotics Institute, School of Computer Science Pittsburgh, PA
Research Assistant (under Prof. Jeffrey Cohn and Dr. Laszlo Jeni) October 2017 – present

- Working on a large annotated psychological study dataset consisting of video recordings of conversations of parents and children on quantifying family behaviour (predicting mental disorders like depression)
- Exploring behaviour based gender differences in children based on the influence of head movements, facial expressions (Facial Action Units) and body pose
- Developing multi-modal emotion recognition system based on deep learning and hand-crafted features (based on behavioural science studies) to predict the annotated verbal and non-verbal emotions in the dataset

Nanyang Technological University, School of Computer Science & Engineering Singapore
Research Staff (*under Prof. Lam Siew Kei)* **[PUBLICATIONS LINKS - 1, 2, 3]** *August 2016 – May 2017*

- Designed a parallel and hardware efficient approximate implementation of Deformable Parts Model algorithm for low power, real time pedestrian detection system based on Altera FPGA and Terasic camera
- Requires around 40% less hardware resources than the existing state of the art FPGA implementation for comparable performance