Rohit Gajawada

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EDUCATION

Georgia Institute of Technology, Atlanta, Georgia — *Aug '19 - May '21*
Master of Science in Computer Science — **GPA: 4.0/4.0**

International Institute of Information Technology (IIIT-H), Hyderabad, India — *Aug '15 - May '19*
Bachelors of Technology in Computer Science and Engineering (Honors in Computer Vision) — **GPA: 8.41/10.0**

TECHNICAL SKILLS

Programming Languages	Python, C, C++, MATLAB, Bash, Java, HTML, CSS, JavaScript
ML/DL/CV	PyTorch, Keras, TensorFlow, OpenCV, scikit-learn, scikit-image
Other Libraries and Tools	Git, LaTeX, OpenGL, WebGL, SQL, PyGame

EXPERIENCE

Graduate Researcher - Computational Perception Laboratory, Georgia Tech — *Sept '19 - Dec '19*

- Worked on few shot learning for object recognition using shape priors from 3D reconstruction.

Machine Learning Intern - Computer Vision Center, Universitat Autònoma de Barcelona — *May '18 - July '18*

- Worked on unsupervised domain adaptation for end-to-end imitation learning for autonomous driving.
- Implemented CycleGAN, UNIT, WDGRL and LSD-seg based methods for domain adaptation.
- Trained models in PyTorch and CARLA Simulator, deployed in real world using Jetson TX2 and Raspberry Pi.

Undergraduate Researcher - Center for Visual Information Technology, IIIT-H — *Mar '17 - Apr '19*

- Developed a full binarization method for deep CNNs that attains an increase of upto 8% in accuracy and 21% in compression.
- Developed a distribution-aware approach for binarizing deep CNNs that attains an increase of 2.5% in accuracy.
- Created a style transfer based data augmentation method for spoof detection resulting in upto 3% increase in TDR.

Teaching Assistant - Georgia Tech, IIIT-H — *Jan '18 - Present*

- Courses: Computer Vision (Spring '20, Spring '19), Graphics (Spring '18)

PROJECTS

Eye Gaze Detection using Attention Modeling *(PyTorch, Python)*

- Implemented a deep learning model that follows the gaze of people and identifies salient objects in an image.
- The model does this by extracting head pose and gaze orientation of faces detected by a SSD detector.

Automatic Top View Registration of Sports Videos *(Python)*

- Created a semi-supervised method via camera augmentations that uses pix2pix to make edge map and homography pairs.
- For a query camera view image, KNN with HOG matching is done to get the optimal top view homography.

Sketch Based Image Retrieval *(MATLAB)*

- Implemented an edge grouping based SBIR system that uses a RankSVM, graph cuts, energy filtering and k-NN.

BrickBreaker, Bloxorz and 3D Aquarium *(C++, OpenGL, JS, WebGL)*

- Built a 2D game, a 3D game and a 3D aquarium simulator which incorporate physics, lighting and shaders.

Part Of Speech Tagger *(PyTorch, Python)*

- Implemented an LSTM based POS Tagger that uses embeddings of both word level and character level n-grams.

Digital Image Processing Toolbox *(MATLAB, Python)*

- Implemented several algorithms for seam carving, resampling, blending, transformation, compression and filtering.

PUBLICATIONS

- ***Hybrid Binary Networks: Optimizing for Accuracy, Efficiency and Memory****, A. Prabhu, V. Batchu,* ***R. Gajawada****, S. Munagala, A. Namboodiri,* ***WACV 2018***
- ***Distribution-Aware Binarization of Neural Networks for Sketch Recognition****, A. Prabhu, V. Batchu, S. Munagala,* ***R. Gajawada****, A. Namboodiri,* ***WACV 2018***
- ***Universal Material Translator: Towards Spoof Fingerprint Generalization****,* ***R. Gajawada*****, A. Popli*, T. Chugh, A. Namboodiri, A.K. Jain,* ***ICB 2019***

SELECTED COURSEWORK

Computer Vision, Machine Learning, Software Engineering, Natural Language Processing, ML with Limited Supervision, Optimization Methods, Artificial Intelligence, Digital Image Processing, Graphics, Mobile Manipulation, Algorithms