Rohit Gajawada

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EDUCATION

Georgia Institute of Technology, Atlanta, Georgia — *Aug '19 - May '21 (expected)*
Master of Science in Computer Science

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

EXPERIENCE

Graduate Researcher - Center for Behavioral Imaging, Georgia Tech — *Aug '19 - Present*

- Working on incremental learning for 3D object recognition with Prof. James M. Rehg.

Research 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 - IIIT-H — *Jan '18 - May '19*

- Courses: Computer Vision (Spring '19), Computer 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.

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

- BrickBreaker and Bloxorz are 2D and 3D games respectively which incorporate physics, lighting and shaders.
- Created a 3D Aquarium with lighting, bubbles, reflective glass and multiple kinds of fish.

Ultimate Tic-Tac-Toe Bot — *(Python)*

- Developed a tree search based game bot using minimax algorithm, alpha beta pruning and heuristics.

Sketch Based Image Retrieval — *(MATLAB)*

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

Reinforcement Learning Algorithms — *(PyTorch, Python)*

- Implemented sample efficient ACER, DQN, Double DQN, Policy Gradient and Actor-Critic agents.

Digital Image Processing Toolbox — *(MATLAB)*

- Implemented several algorithms for resampling, blending, transformation, restoration, 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***

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

SELECTED COURSEWORK

Computer Vision, Machine Learning, Digital Image Processing, Optimization Methods, Artificial Intelligence, Software Engineering, Computer Graphics, Reinforcement Learning, Data Structures, Algorithms, Operating Systems, Web Dev, Scripting