

# Rohit Gajawada

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## EDUCATION

<b>Georgia Institute of Technology</b> , Atlanta, Georgia <i>Master of Science in Computer Science</i>	<i>Aug '19 - May '21 (expected)</i>
<b>International Institute of Information Technology (IIIT-H)</b> , Hyderabad, India <i>Bachelors of Technology in Computer Science and Engineering (Honors in Computer Vision)</i>	<i>Aug '15 - May '19</i> GPA: 8.41/10.0

## EXPERIENCE

<b>Research Intern - Computer Vision Center</b> , Universitat Autònoma de Barcelona <ul style="list-style-type: none"><li>• Worked on unsupervised domain adaptation for end-to-end imitation learning for autonomous driving.</li><li>• Implemented CycleGAN, UNIT, WDGRU and LSD-seg based methods for domain adaptation.</li><li>• Trained models in PyTorch and CARLA Simulator, deployed in real world using Jetson TX2 and Raspberry Pi.</li></ul>	<i>May '18 - July '18</i>
<b>Undergraduate Researcher - Center for Visual Information Technology</b> , IIIT-H <ul style="list-style-type: none"><li>• Developed a full binarization method for deep CNNs that attains an increase of upto 8% in accuracy and 21% in compression.</li><li>• Developed a distribution-aware approach for binarizing deep CNNs that attains an increase of 2.5% in accuracy.</li><li>• Created a style transfer based data augmentation method for spoof detection resulting in upto 3% increase in TDR.</li></ul>	<i>Mar '17 - Apr '19</i>
<b>Teaching Assistant - IIIT-H</b> <ul style="list-style-type: none"><li>• Courses: Computer Vision (Spring '19), Computer Graphics (Spring '18)</li><li>• Conducted tutorials, mentored students for projects, graded and helped in design of assignments and exams.</li></ul>	<i>Jan '18 - May '19</i>

## PROJECTS

<b>Eye Gaze Detection using Attention Modelling</b> <ul style="list-style-type: none"><li>• Implemented a deep learning model that follows the gaze of people and identifies salient objects in an image.</li><li>• The model does this by extracting head pose and gaze orientation of faces detected by a SSD detector.</li></ul>	<i>(PyTorch, Python)</i>
<b>BrickBreaker, Bloxorz and 3D Aquarium</b> <ul style="list-style-type: none"><li>• BrickBreaker and Bloxorz are 2D and 3D games respectively which incorporate physics, lighting and shaders.</li><li>• Created a 3D Aquarium with lighting, bubbles, reflective glass and multiple kinds of fish.</li></ul>	<i>(C++, OpenGL, JS, WebGL)</i>
<b>Ultimate Tic-Tac-Toe Bot</b> <ul style="list-style-type: none"><li>• Developed a tree search based game bot using minimax algorithm, alpha beta pruning and heuristics.</li></ul>	<i>(Python)</i>
<b>Reinforcement Learning Algorithms</b> <ul style="list-style-type: none"><li>• Implemented sample efficient ACER, DQN, Double DQN, Policy Gradient and Actor-Critic agents.</li></ul>	<i>(PyTorch, Python)</i>
<b>Sketch Based Image Retrieval</b> <ul style="list-style-type: none"><li>• Implemented an edge grouping based SBIR system that uses a RankSVM, graph cuts, energy filtering and k-NN.</li></ul>	<i>(MATLAB)</i>
<b>Digital Image Processing Toolbox</b> <ul style="list-style-type: none"><li>• Implemented several algorithms for resampling, blending, transformations, restoration, compression and filtering.</li></ul>	<i>(MATLAB)</i>

## 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

<b>Programming Languages</b>	Python, C, C++, MATLAB, Bash, Java, HTML, CSS, JavaScript
<b>ML/DL/CV</b>	PyTorch, Keras, TensorFlow, OpenCV, scikit-learn, scikit-image
<b>Other Libraries and Tools</b>	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