

# Rohit Gajawada

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## EDUCATION

|  |                          |
|--|--------------------------|
| <b>Georgia Institute of Technology</b> , Atlanta, Georgia                                      | <i>Aug '19 - May '21</i> |
| <i>Master of Science in Computer Science</i>   | <b>GPA: 4.0/4.0</b>      |
| <b>International Institute of Information Technology (IIIT-H)</b> , Hyderabad, India           | <i>Aug '15 - May '19</i> |
| <i>Bachelors of Technology in Computer Science and Engineering (Honors in Computer Vision)</i> | <b>GPA: 8.41/10.0</b>    |

## TECHNICAL SKILLS

|                                  |  |
|----------------------------------|--|
| <b>Programming Languages</b>     | Python, C, C++, MATLAB, Bash, 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                         |

## EXPERIENCE

|   |                           |
|---|---------------------------|
| <b>Machine Learning Intern - PathAI</b> , Boston, MA  | <i>May '20 - Present</i>  |
| <ul style="list-style-type: none"><li>Working on deep learning approaches for computational histopathology.</li></ul>   |                           |
| <b>Machine Learning Intern - Computer Vision Center</b> , Universitat Autònoma de Barcelona   | <i>May '18 - July '18</i> |
| <ul style="list-style-type: none"><li>Worked on unsupervised domain adaptation for end-to-end imitation learning for autonomous driving.</li><li>Trained models in PyTorch and CARLA Simulator, deployed in real world using Jetson TX2 and Raspberry Pi.</li></ul>                         |                           |
| <b>Graduate Researcher - Computational Perception Laboratory</b> , Georgia Tech   | <i>Sept '19 - Dec '19</i> |
| <ul style="list-style-type: none"><li>Worked on few shot learning for object recognition using shape priors from 3D reconstruction.</li></ul>   |                           |
| <b>Undergraduate Researcher - Center for Visual Information Technology</b> , IIIT-H   | <i>Mar '17 - Apr '19</i>  |
| <ul style="list-style-type: none"><li>Developed binarization methods for deep CNNs that attain increases of upto 8% in accuracy and 21% in compression.</li><li>Created a style transfer based data augmentation method for spoof detection resulting in upto 3% increase in TDR.</li></ul> |                           |
| <b>Teaching Assistant</b> - Georgia Tech, IIIT-H  | <i>Jan '18 - Present</i>  |
| <ul style="list-style-type: none"><li>Courses: Computer Vision (Spring '20, Spring '19), Graphics (Spring '18)</li></ul>  |                           |

## PROJECTS

|   |                                 |
|---|---------------------------------|
| <b>Automatic Top View Registration of Sports Videos</b>   | <i>(Python)</i>                 |
| <ul style="list-style-type: none"><li>Created a semi-supervised method via camera augmentations that uses pix2pix to make edge map and homography pairs.</li><li>For a query camera view image, KNN with HOG matching is done to get the optimal top view homography.</li></ul>             |                                 |
| <b>Embedding Common Sense into Question Answering</b>   | <i>(PyTorch, Python)</i>        |
| <ul style="list-style-type: none"><li>Implemented an MCQ solver that ranks question answer pairs using a fine-tuned BERT model on the SocialQA dataset.</li><li>Augmented the context with common sense inferences using a GPT-based model trained on the ATOMIC knowledge graph.</li></ul> |                                 |
| <b>Eye Gaze Follower</b>  | <i>(PyTorch, Python)</i>        |
| <ul style="list-style-type: none"><li>Implemented a model that follows the gaze of people detected by a SSD detector by extracting saliency and head pose.</li></ul>  |                                 |
| <b>Sketch Based Image Retrieval</b>   | <i>(MATLAB)</i>                 |
| <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>  |                                 |
| <b>BrickBreaker, Bloxorz and 3D Aquarium</b>  | <i>(C++, OpenGL, JS, WebGL)</i> |
| <ul style="list-style-type: none"><li>Built a 2D game, a 3D game and a 3D aquarium simulator which incorporate physics, lighting and shaders.</li></ul>   |                                 |
| <b>Part Of Speech Tagger</b>  | <i>(PyTorch, Python)</i>        |
| <ul style="list-style-type: none"><li>Implemented an LSTM based POS Tagger that uses embeddings of both word level and character level n-grams.</li></ul>   |                                 |

## PUBLICATIONS

- Universal Material Translator: Towards Spoof Fingerprint Generalization**, R. Gajawada\*, A. Popli\*, T. Chugh, A. Namboodiri, A.K. Jain, *ICB 2019*
- 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*

## 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