Rohit Gajawada

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EDUCATION

Georgia Institute of Technology, Atlanta, Georgia
Master of Science in Computer Science (Specialization in Machine Learning)
Aug '19 - May '21
GPA: 4.0/4.0

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

TECHNICAL SKILLS

Programming Languages	Python, C, C++, SQL, MATLAB, Bash, Java, JavaScript, HTML, CSS
ML/CV Libraries	PyTorch, Keras, scikit-learn, TensorFlow, OpenCV
Other Libraries	numpy, pandas, OpenGL, OpenMP, D3.js, NetworkX, CUDA, PySpark
Miscellaneous	Git, CMake, LaTeX, Flask, Jira

EXPERIENCE

Software Engineering Intern - Uber ATG, San Francisco, CA
Aug '20 - Dec '20

- Developed a novel camera and lidar sensor fusion based deep learning approach for birds eye view segmentation, which performs better than certain state of the art methods while being more computationally and memory efficient on vehicle.
- Added learnt temporal fusion extensions which perform better especially on low to the ground obstacles and construction.
- Developed a distributed IoU metrics suite for evaluation of birds eye view and range view semantic segmentation models.
- Setup calibration of semantic segmentation models in order to improve reliability and interpretability.
- Integrated all these features into ATG's perception codebase after code review using PyTorch and Python.

Machine Learning Intern - PathAI, Boston, MA
May '20 - Aug' 20

- Developed deep learning based multi-task learning and fusion approaches for cancer diagnosis of whole slide images.
- Showed that common features between cell and tissue models results in upto a 5% accuracy boost and improved heatmaps.
- Integrated these features into PathAI's ML platform after code review using TensorFlow, Keras and Python.

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.
- Trained models in PyTorch and CARLA Simulator, deployed in real world using Jetson TX2 and Raspberry Pi.

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

- Courses: Computer Vision (Spring '21, Spring '20, Spring '19), Graphics (Spring '18)

PROJECTS

Automatic Top View Registration of Sports Videos
(Python, OpenCV, PyTorch)

- Created a semi-supervised method using homography based camera augmentations, KNN, HOG matching and pix2pix.

Eye Gaze Follower
(PyTorch, Python)

- Implemented a model that follows the gaze of people detected by a SSD detector by extracting saliency and head pose.

Game Development Projects
(C++, OpenGL, JS, WebGL)

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

Embedding Common Sense into Question Answering
(PyTorch, Python)

- Implemented a BERT based MCQ solver augmented with a GPT model trained on a common sense knowledge graph.

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**

RELEVANT COURSEWORK

Computer Vision, Machine Learning, Software Engineering, High Performance Computing, Algorithms, Big Data Analytics, Operating Systems, Database Systems, Distributed Systems, Web Search & Mining, NLP, Graphics, Mobile Manipulation