Mohit Jain

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EDUCATION

University of California, San Diego   La Jolla, CA, USA | Jan 2020 - June 2022 (Expected)
MSc. Computer Science
Specialization: Artificial Intelligence
Teacher Assistant (TA): Unsupervised Learning *(Winter 2022)*, Introduction to Visual Learning *(Spring 2021)*
Coursework: Convex Optimization, Mathematics for Robotics, Deep Reinforcement Learning, Domain Adaptation

Indian Institute of Technology, Roorkee   Roorkee, UK, India | July 2016 - June 2020
B.Tech. Electrical Engineering

WORK EXPERIENCE

UNIVERSITY OF CALIFORNIA, SAN DIEGO | Research Assistant   CA, USA | July 2020 – Present
- Advised by **Prof. Xiaolong Wang**.
- Conducting research on improving **simulation to real transfer and generalization in robotics**.
- Currently **leading a project** in which we aim to learn deep 3D features of the environment and use that to train an actor-critic reinforcement learning agent to solve novel robotic manipulation tasks.

UNIVERSITY OF MARYLAND, COLLEGE PARK | Research Intern   MD, USA | June 2019 - Jan 2020
- Advised by **Prof Abhinav Shrivastava**.
- Conducted research on **understanding actions in videos** and transforming them into a target action video.
- The project was challenging since no labeled data was available for such problems. To tackle this we used **unsupervised deep learning** based methods such as Cycle-GAN.

GTS CORPORATE | Software Engineering Intern   Dubai, UAE | Nov 2018 – Jan 2019
- Developed a Web Portal using **Django** to be used by the Sales Team at GTS Corporate.
- The designed web portal was modeled to have a simple interface that allowed the sales team to log their daily activities, meetings, and project deals quick and succinctly.

PUBLICATIONS

LOOK CLOSER: BRIDGING EGOCENTRIC AND THIRD-PERSON VIEWS WITH TRANSFORMERS FOR ROBOTIC MANIPULATION ⬈
R. Jangir, N. Hansen, S. Ghosal, **M. Jain**, and X. Wang
- Accepted for publication in **RA-L 2022** and **ICRA 2022**.
- We proposed a novel attention based multi camera visual reinforcement learning algorithm for robotics and verified its superiority over single camera and naive multi-camera baselines by observing consistent improvements (upto 700%) in task success rates and **Sim2Real Transfer**.

PROJECTS

INFOGAN-PYTORCH ⬈   Python, PyTorch, Computer Vision, Generative Modeling
246 Stars on GitHub
Implemented the InfoGAN model that learns to identify factors of variation within datasets in a completely unsupervised way. Tested the models by running experiments on challenging datasets such as MNIST, SVHN, and CelebA. On MNIST the model was able to identify the stroke thickness of each handwritten digit without any explicit guidance.

GENERATING-DEVANAGARI-USING-DRAW ⬈   Python, PyTorch, VAE, Computer Vision
89 Stars on GitHub
Implemented the DRAW model to generate characters from the Devnagari Script by gradually "drawing" across the canvas as a human does.

LOCATION-ALARM ⬈   Java, Android
Android app developed during the **Microsoft Code.fun.do** 2017 Hackathon as team of 3 with me as **project leader**.

SKILLS

Languages: Python, C++, Java, C, SQL, HTML/CSS, LaTeX
Machine Learning: PyTorch, Tensorflow, Keras, Numpy, Matplotlib, Scikit-Learn, Scipy, Docker, Kubernetes