

Mohit Jain

mohitjain6199@gmail.com | [linkedIn/natsu6767](https://www.linkedin.com/in/natsu6767) | +1 858-214-4989 | [github/Natsu6767](https://github.com/Natsu6767) | <https://natsu6767.github.io/>

WORK EXPERIENCE

PINTEREST | MACHINE LEARNING ENGINEER

CA, USA | August 2022 – Present

- Launched a **transformer-based model** to incorporate user activity history on Pinterest, resulting in 3% core engagement gains for ads on Pinterest while reducing CPC for advertisers by 1%.
- Working in ads engagement modeling for ads ranking. Developing state-of-the-art machine learning models to predict ad engagement using DNNs, transformers, transfer learning, and multi-task learning and testing model improvements using Offline and Online A/B testing.
- Increased resource usage efficiency by up to 100% during offline model iterations, allowing the team to iterate over more model ideas simultaneously.

UNIVERSITY OF CALIFORNIA, SAN DIEGO | RESEARCH ASSISTANT

CA, USA | July 2020 – June 2022

- Advised by **Prof. Xiaolong Wang**.
- Researched on **simulation to real transfer and generalization in robotics** using computer vision and reinforcement learning methods leading to 2 major journal publications.

UNIVERSITY OF MARYLAND, COLLEGE PARK | RESEARCH INTERN

MD, USA | June 2019 – Jan 2020

- Advised by **Prof. Abhinav Shrivastava**.
- Researched on **actions morphing in videos** by transforming actions in a source video into a target action video using unsupervised learning methods such as Cycle-GAN.

SKILLS

Languages: Python, C, C++, MySQL, HTML/CSS, \LaTeX

Machine Learning: PyTorch, Tensorflow, Keras, Numpy, Matplotlib, Scikit-Learn, Scipy, Docker, Kubernetes

EDUCATION

University of California, San Diego

La Jolla, CA, USA | Jan 2020 – June 2022

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

PUBLICATIONS

VISUAL REINFORCEMENT LEARNING WITH SELF-SUPERVISED 3D REPRESENTATIONS

Y. Ze, N. Hansen, Y. Chen, **M. Jain**, and X. Wang

- Accepted for publication in **RA-L 2023** and **IROS 2023**.
- Presented a unified framework for self-supervised learning of 3D representations for motor control using reinforcement learning. Using this approach, we observe up to 100% increase in success rate for Sim2Real Transfer.

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**.
- Proposed a novel attention-based multi-camera visual reinforcement learning algorithm for robotics and verified its superiority over a single camera and naive multi-camera baselines by observing consistent improvements (upto 700%) in task success rates and **Sim2Real Transfer**.

PROJECTS

INFOGAN-PYTORCH

289 Stars on GitHub

PYTHON, PYTORCH, COMPUTER VISION, GENERATIVE MODELING

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

90 Stars on GitHub

Implemented the DRAW model to generate characters from the Devnagari Script by gradually "drawing" across the canvas as a human does.