RUTAV SHAH

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EDUCATION

The University of Texas at Austin August 2022 - Now
Ph.D. student in Computer Science *Austin, USA*
Advisors: Professor Roberto Martín Martín and Professor Yuke Zhu
Research Focus: MultiModal Task Specification, Human-Robot Interface, Robotics

Indian Institute of Technology, Kharagpur July 2018 - April 2022
Undergraduate in Computer Science, GPA: 9.64/10 *Kharagpur, India*
Advisors: Dr. Vikash Kumar and Professor Abir Das
Research Focus: Representation Learning, Domain Adaptation, Robotics

PUBLICATIONS

* Equal contribution. † Equal advising

MUTEX: Learning Unified Policies from Multimodal Task Specifications
Rutav Shah, Roberto Martín-Martín[†], Yuke Zhu[†]
Conference on Robot Learning (CoRL), 2023

RoboHive: A Unified Framework for Robot Learning
Vikash Kumar, **Rutav Shah***, Gaoyue Zhou*, Vincent Moens, Vittorio Caggiano, Jay Vakil, Abhishek Gupta, Aravind Rajeswaran
Neural Information Processing Systems (NeurIPS) Track on Datasets and Benchmarks, 2023

RRL: Resnet as Representation for Reinforcement Learning
Rutav Shah*, Vikash Kumar*
International Conference on Machine Learning (ICML), 2021

Contrast and Mix: Temporal Contrastive Video Domain Adaptation with Background Mixing
Aadarsh Sahoo, **Rutav Shah**, Rameswar Panda, Kate Saenko, Abir Das
Neural Information Processing Systems (NeurIPS), 2021

MANUSCRIPTS

LOTUS: Continual Imitation Learning for Robot Manipulation Through Unsupervised Skill Discovery
Weikang Wan, Yifeng Zhu*, **Rutav Shah***, Yuke Zhu
CoRL Workshop Towards Reliable and Deployable Learning-Based Robotic Systems, 2023

Inflatable Fingertips with Stretchable Pressure Sensors for Adaptive Grasping and Manipulation
Hongyang Shi, **Rutav Shah**, Zhengjie Li, Heeyong Huh, Yuke Zhu, and Nanshu Lu
IROS Workshop on IPPC for Physically and Contextually-Aware Robot Autonomy, 2023

Open X-Embodiment: Robotic Learning Datasets and RT-X Models
Part of the community effort for collecting large-scale robot dataset.
Preprint arXiv, 2023

EXPERIENCE

KLA-Tencor Corporation Feb 2022 - July 2022
Algorithm Research & Development Intern *Chennai, India*
Developed GPU-accelerated implementation of Random Decision Forests

Developer for JEE Advanced'2021 September 2021 - December 2021
Supervisor: Professor Mainack Mondal and Professor Debajit Chakraborty *IIT Kharagpur, India*
Implemented algorithm for seat allocation and designed website for JEE Advanced'2021

Robotics Institute Summer Scholar (RISS) program
Advisors: Dr. Vikash Kumar and Professor Abhinav Gupta
Research in learning generalizable policy using representation learning.

June 2021 - August 2021
Carnegie Mellon University, USA

Autonomous Ground Vehicle (AGV) Lab
Advisor: Professor Debajit Chakraborty
Developed planning algorithms and tested them on Mahindra E2O for autonomous navigation.

April 2019 - December 2020
IIT Kharagpur, India

TEACHING & OUTREACH

Graduate Teaching Assistant
Undergraduate Course, RBT350: Gateway to Robotics

August 2023 - Now
Austin, USA

Teaching Assistant
Math Camp for students of *Grade 9-12*, Epsilon Camp, Raising a Mathematician

April 2022
Online

RoboLaunch
Outreach program to increase high-school engagement in robotics.

August 2021 - December 2021
Carnegie Mellon University, USA

ACHIEVEMENTS

- **1st Position, Bosch Mid-Prep, Inter-IIT TechMeet**, *Indian Institute of Technology, India, 2022*
- **Runner Up Position, Intelligent Ground Vehicle Competition (IGVC)**, *Oakland University, USA, 2019*
- **2nd Position, Mathematical Olympiad**, *Indian Institute of Technology, Kharagpur, 2019*
- **JEE Advanced, All India Rank 257 (Top 0.1%)**, *Indian Institute of Technology (IITs), 2018*
- **KVPY, All India Rank 278 (Top 1%)**, *Department of Science and Technology, Government of India, 2017*
- **Merit in Indian National Mathematical Olympiad**, *Homi Bhabha Centre for Science Education, 2016*