Gireesh Nandiraju

Galbot Co. Ltd., Beijing

f20170720h@alumni.bits-pilani.ac.in , user432.github.io

Motivation

I am a second-year PhD student in Computer Science at CFCS, PKU. My research focuses on developing algorithms for solving long-horizon manipulation problems in complex and contact-rich environments. I work on learning sim-to-real transferable skills for contact-rich manipulation tasks.

Education

Peking University — **Beijing, China**
PhD in Computer Science — *2024–Present*
- Advised by Prof. He Wang
- Supported by the Beijing Government Scholarship (4+ years of support)

Birla Institute of Technology and Science, Pilani (BITS Pilani) — **Hyderabad, India**
B.E. in Electronics and Instrumentation Engineering — *2017–2021*

Publications

[10]: Yuanchen Ju*, Yongyuan Liang*, Yen-Jen Wang*, **Nandiraju Gireesh**, Yuanliang Ju, Seungjae Lee, Qiao Gu, Elvis Hsieh, Furong Huang, Koushil Sreenath. *MomaGraph: State-Aware Dynamic Scene Graphs with Vision-Language Models for Embodied Task Planning*. **Under Review** at International Conference on Learning Representations (**ICLR** 2026)

[9]: **Nandiraju Gireesh**, Yuanliang Ju, He Wang. *MCPlanner: Multi-Scale Consistency Planning for Offline Reinforcement Learning*. **Under Review** at International Conference on Learning Representations (**ICLR** 2026)

[8]: **Nandiraju Gireesh**, Yuanliang Ju, Chaoyi Xu, Weiheng Liu, Yuxuan Wan, He Wang. *HDFlow: Hierarchical Diffusion-Flow Planning for Long-horizon Robotic Assembly*. **Under Review** at International Conference on Learning Representations (**ICLR** 2026)

[7]: Tan-Dzung Do, **Nandiraju Gireesh**, Jilong Wang, He Wang. *Watch Less, Feel More: Sim-to-Real RL for Generalizable Articulated Object Manipulation via Motion Adaptation and Impedance Control*. In IEEE International Conference on Robotics and Automation (**ICRA** 2025)

[6]: Jiazhao Zhang*, **Nandiraju Gireesh***, Jilong Wang, Xiaomeng Fang, Chaoyi Xu, Weiguang Chen, Liu Dai, He Wang. *GAMMA: Graspability-Aware Mobile MAnipulation Policy Learning based on Online Grasping Pose Fusion*. In IEEE International Conference on Robotics and Automation (**ICRA** 2024)

[5]: **Nandiraju Gireesh***, Ayush Agrawal*, Ahana Dutta*, Snehasis Banerjee, Mohan Sridharan, Brojeshwar Bhowmick, Madhava Krishna. *Sequence Agnostic Multi-Object Navigation*. In IEEE International Conference on Robotics and Automation (**ICRA** 2023)

[4]: **Nandiraju Gireesh**, D. A. Sasi Kiran, Snehasis Banerjee, Mohan Sridharan, Brojeshwar Bhowmick, Madhava Krishna. *Object Goal Navigation using Data Regularized Q-Learning*. In 18th IEEE International Conference on Automation Science and Engineering (**IEEE CASE** 2022)

[3]: D. A. Sasi Kiran*, Kritika Anand*, Chaitanya Kharyal*, Gulshan Kumar, **Nandiraju Gireesh**, Snehasis Banerjee, Ruddra dev Roychoudhury, Mohan Sridharan, Brojeshwar Bhowmick, Madhava Krishna. *Spatial Relation Graph and Graph Convolutional Network for Object Goal Navigation*. In 18th IEEE International Conference on Automation Science and Engineering (**IEEE CASE** 2022)

[2]: Mandan Naresh, **Nandiraju Gireesh**, Paresh Saxena, Manik Gupta. *SAC-ABR: Soft Actor-Critic based deep reinforcement learning for Adaptive BitRate streaming*. In 14th IEEE International Conference on COMmunication Systems & NETworkS (**IEEE COMSNETS** 2022)

[1]: Xingyi Yang, **Nandiraju Gireesh**, Eric Xing, Pengtao Xie. *XRayGAN: Consistency-preserving Generation of*

X-ray Images from Radiology Reports. arXiv Pre-print

Research Experience

Galbot
Student Researcher — *Sep 24 – Present*
Advisor: Prof. He Wang, and Prof. Li Yi

PKU EPIC Lab
Research Intern — *Mar 23 – Aug 24*
Advisor: Prof. He Wang

Robotics Research Center (RRC), IIIT Hyderabad
Research Assistant — *May 21–Mar 23*
Advisors: Prof. K Madhava Krishna, Prof. Mohan Sridharan, and Dr. Brojeshwar Bhowmick

Data Science Lab, BITS Hyderabad
Undergraduate Thesis Student — *Jan 21–May 21*
Advisor: Prof. Paresh Saxena

AI-for-Healthcare Lab, UC San Diego
Research Intern — *Mar 20–Aug 20*
Advisor: Prof. Pengtao Xie

Awards

2024–Present: Beijing Government Scholarship (BGS)
2018–2021: Prime Minister's Scholarship Scheme (PMSS)

Talks & Presentations

May 2024: *Audio-visual learning for Contact-rich Manipulation*, Galbot
Mar 2024: *Impedance-control for Contact-rich Manipulation*, EPIC Lab - PKU
Dec 2023: *Latest trends in Mobile Manipulation*, Galbot
Apr 2023: *Embodied Mobile Manipulation*, EPIC Lab - PKU
Jan 2023: *Sequence-Agnostic Multi-Object Navigation*, RnD Showcase - IIIT Hyd, 2023
Jan 2022: *Object Goal Navigation using Data Regularized Q-Learning*, RnD Showcase - IIIT Hyd, 2022

Research Mentorship

Ayush Agrawal (RRC Intern, IIIT-H)
Ahana Dutta (B.Tech + MS at IIIT-H)