

# APOORVA VASHISTH

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## EDUCATION

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**Ph.D. in Computer Science**, Purdue University Aug 2024 - May 2029

- Research focus on Vision-Language-Action models, agentic AI, long-horizon reasoning, and generalist robotics.
- Latest work lies on the intersection of LLM planning, task and motion planning, and embodied AI.

**Dual Degree in Mechanical Engineering**, Indian Institute of Technology - Kharagpur 2018 - 2023  
*B.Tech (Hon.) & M.Tech (Mechanical Systems Design)* CGPA 9.03/10.00

## SELECTED PUBLICATIONS

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- [CoReLIN: Constraint-based Reasoning for Zero-shot Lifelong Interactive Navigation](#).  
Accepted at European Conference on Computer Vision (ECCV 2026)  
*Apoorva Vashisth*, Manav Kulshrestha, Pranav Bakshi, Damon Conover, Guillaume Sartoretti\*, Aniket Bera\*.
- [Scalable Multi-Robot Informative Path Planning for Target Mapping via Deep Reinforcement Learning](#).  
Accepted at IEEE Robotics and Automation Letters (RAL 2026)  
*Apoorva Vashisth*, Manav Kulshrestha, Damon Conover, Aniket Bera.
- [Deep Reinforcement Learning with Dynamic Graphs for Adaptive Informative Path Planning](#).  
Accepted at IEEE Robotics and Automation Letters (RAL 2024)  
*Apoorva Vashisth*, Julius Rücker, Federico Magistri, Cyrill Stachniss, Marija Popović
- [CA<sub>t</sub>NIPP: Context-Aware Attention-based Network for Informative Path Planning](#).  
Accepted at the 6th Annual Conference on Robot Learning (CoRL 2023)  
Yuhong Cao, Yizhuo Wang, *Apoorva Vashisth*, Haolin Fan, Guillaume Sartoretti

## PREPRINTS

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- **MA-HATS: Multi-Agent Herding with Attention in Time and Space**.  
Manav Kulshrestha\*, Amruta Gokhale\*, *Apoorva Vashisth*, Damon Conover, Aniket Bera.

## SKILLS

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**Programming Languages** Python, C/C++, Arduino, MATLAB, Javascript

**Tech & Frameworks** PyTorch, Ray, Unreal Engine, AirSim, ROS/2, Numpy, Pandas, TensorFlow, sklearn, OpenCV, Gymnasium, Anaconda, Jupyter Notebook, Docker, Matplotlib

## INVITED TALKS

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Multi-Robot Informative Path Planning for Efficient Target Mapping using Deep Reinforcement Learning  
*Purdue University (Computer Science Graduate Symposium), 2025*

## RESEARCH EXPERIENCE

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**Research Assistant**, Purdue University, IDEAS Lab Aug 2024 - Present

- Research focusing on LLM reasoning, deep reinforcement learning, multi-robot systems, and embodied AI.

**Research Intern**, Multi Agent Robotic Motion Lab, National University of Singapore Aug 2021 - Aug 2024

- Developed an adaptive, reinforcement learning based method for Informative Path Planning in an obstacle-free 2D environment subject to budget constraints (Published in the 6<sup>th</sup> Annual Conference on Robot Learning).

**Research Intern**, Lab for Photogrammetry and Robotics, University of Bonn Mar 2023 - Feb 2024

- Proposed a novel dynamic graph approach for adaptive informative motion planning to map targets-of-interest in 3D environment in presence of unknown obstacles (Published in IEEE Robotics and Automation Letters).

## LEADERSHIP

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- Executive Member of the soft skills society Communiqué Oct 2018 - June 2021
- Project Lead - Advanced Drones Research Group Jan 2021 - Oct 2021
- Member of Technology Sub-committee, IIT Kharagpur Oct 2019 - May 2021

## AWARDS AND HONORS

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Herbold Scholarship, Ross Fellowship, IITKGP Foundation USA International Internship Scholarship Award (only 7 awarded), National Talent Search Examination (top 99.91 percentile), collectively reviewed 30 manuscripts for CVPR, ECCV, NeurIPS, RSS, ICRA, RAL, IROS, IEEE TASE and MRS.