

Viraj Parimi

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🌐 Website [🔗](#) Google Scholar [🔗](#) GitHub [🔗](#) YouTube [🔗](#)

🎓 Education

Massachusetts Institute of Technology (MIT) Cambridge, MA 2021–Present

Ph.D., Electrical Engineering and Computer Science

Advisor(s): B. C. Williams • *Focus:* Learning-guided planning; Safe multi-agent autonomy

Selected coursework: Algorithms for Inference; Robotic Manipulation; Computational Sensorimotor Learning; Theory of Computation

Carnegie Mellon University (CMU) Pittsburgh, PA 2021

M.S., Robotics (GPA: 4.08/4.00)

Advisor(s): S. F. Smith • *Focus:* Planning & decision-making

Selected coursework: Planning & Decision Making in Robotics; Statistical Techniques in Robotics; Mechanics of Manipulation

IIT-Delhi Delhi, India 2019

B.Tech, Computer Science and Engineering (Hons) (GPA: 8.96/10)

Advisor(s): T. Chakraborty; P. Kumaraguru • *Focus:* Complex networks; Graphs; Graduated with Honors

Selected coursework: Statistical Machine Learning; Deep Learning; NLP; Graph Theory; Operating Systems

🏢 Experience

Academic Research

- **MIT CSAIL (MERS)** Research Assistant 2021–Present
Risk-aware multi-agent planners (dynamic risk budgeting; conflict/precedence); diffusion-guided multi-arm planning with fewer collision repairs; featured in MIT CSAIL CAP [spotlight](#) (2022).
- **CMU RISS** Research Scholar Summer 2018
Bayesian sequential learning for time-series; up to $10^4\times$ speedup vs. baselines.

Industry

- **Motional** Autonomy Intern Summer 2023
Prototyped lateral-contingency MPC; improved closed-loop stability under injected faults.

📖 Selected Publications

- **V. Parimi**, B. C. Williams, “Diffusion-Guided Multi-Arm Motion Planning”, *CoRL*, 2025. (Also: RSS MRS 2025 Poster) [\[website\]](#) [\[code\]](#)
- M. Feng*, **V. Parimi***, B. C. Williams, “Safe Multi-Agent Navigation guided by Goal-Conditioned Safe RL”, *ICRA*, 2025. (Also: NeurIPS IMOL 2024; CoRL LEAP 2024 Posters) [\[website\]](#) [\[code\]](#)
- J. Olkin*, **V. Parimi***, B. C. Williams, “Multi-Agent Vulcan: An Information-Driven MAPF Approach”, *IROS* (Oral Pitch), 2024. [\[website\]](#) [\[code\]](#)
- I. Isukapati, C. Igoe, E. Bronstein, **V. Parimi**, S. F. Smith, “Hierarchical Bayesian Framework for Bus Dwell Time Prediction”, *IEEE Trans. Intelligent Transportation Systems*, 2020.

* equal contribution

✂ Skills

Languages: Python, C/C++

Robotics/ML: ROS/ROS2, Gazebo, MAPF, MPC, TAMP, PyTorch

Hardware Experience: Manipulators, Drones, Turtlebots

Systems/DevOps: CUDA, Docker, Git, Linux

🏆 Service & Honors

Reviewer: AIJ (2022–2023); IEEE TAES (2025); AAAI (2026); CoRL (2025); ICAPS (2025); IROS (2024–2025); Workshops: CoRL LEAP (2024), AAAI GenPlan (2025), CoRL Resource-Rational RL (2025).

Honors: Qualcomm Fellowship India Finalist (2022); Robotics Institute Summer Scholar (2018); FICCI Scholarship (2018); JEE Main 99.7th percentile (2015).