

# Juntong Peng

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## Education

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| <b>Purdue University</b> , Ph.D. student in Electrical and Computer Engineering | Aug 2024 – Present    |
| • Advised by Prof. Yaobin Chen and Prof. Ziran Wang                             |                       |
| <b>Purdue University</b> , M.S. in Electrical and Computer Engineering          | Aug 2024 – May 2026   |
| <b>Shanghai Jiao Tong University</b> , BEng in Information Engineering          | Sept 2020 – June 2024 |
| • Distinguished Graduates (Top 15%)                                             |                       |

## Selected Publications (Complete list on [Google Scholar](#), \* denotes co-first author)

- **Peng, J.**, Viswanath, H., & Bera, A. (2024). Graph-based decentralized task allocation for multi-robot target localization. *IEEE RAL* 2024.
- Hu, Y., **Peng, J.**, et al. (2024). Communication-Efficient Collaborative Perception via Information Filling with Codebook. *CVPR* 2024.
- Mathew, A.\*, **Peng, J.\***, et al. (2025). RampCast II: A Dual-Interface V2X Framework for Reliable Traffic Information Delivery. *IEEE ITSC* 2025.
- **Peng, J.**, et al. (2026). FleetAgent: Teleoperation Assistant for Autonomous Fleets via Vectorized V2N Messages. *IEEE/RSJ IROS 2026 (Accepted)*.
- **Peng, J.**, et al. (2026). OmniV2X: A Generative Foundation Planner for Efficient End-to-End Cooperative Driving. *IEEE/RSJ IROS 2026 (Accepted)*.

## Research Experience

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| <b>Graduate Research Assistant</b> , Purdue University – West Lafayette, IN                                                                                                                                                            | Aug 2024 – Present      |
| • Conducted research on vulnerable road users (VRUs) trajectory prediction. Built the <b>first</b> large-scale dataset with E-scooter. Developed an algorithm based on the dataset. The project was supported by Toyota North America. |                         |
| • Conducting research on <b>C-V2X application and deployment</b> . Projects (SPR-4934 and SPR-5018) are supported by the Indiana Department of Transportation.                                                                         |                         |
| • Mentoring master's students and undergraduates on the research of connected automated vehicles (CAVs).                                                                                                                               |                         |
| <b>Research Intern</b> , Toyota North America – Mountain View, CA                                                                                                                                                                      | June 2025 – August 2025 |
| • Conducted research on LLM-based robo-taxi management. Filed 3 patents and submitted 1 research paper.                                                                                                                                |                         |
| • Engaged in group and department-level meeting. Presented the intern project to the general manager.                                                                                                                                  |                         |
| <b>Research Intern</b> , Robert Bosch GmbH – Shanghai, CN                                                                                                                                                                              | Jan 2024 – June 2024    |
| • Nominated to an intra-department Best Intern Award for my work on building a reliable distributed system for function offloading among vehicles and infrastructures.                                                                 |                         |
| • Assisted mentors in making proof of concept demonstrations. Designing and validating algorithms on advanced frameworks like Nvidia DeepStream and Flower.                                                                            |                         |
| <b>Research Intern</b> , Purdue University – West Lafayette, IN                                                                                                                                                                        | June 2023 – Oct 2023    |
| • Worked closely with postdoctoral researchers and senior Ph.D. students in the lab to survey topics relevant to multi-robot systems.                                                                                                  |                         |
| • Conducted independent research on task allocation among collaborative robot team, utilizing a decentralized implementation of graph neural network. A first-author paper was published on RA-L.                                      |                         |

## Teaching & Services

**Journal Reviewer:** IEEE Robotics and Automation Letters, IEEE Transactions on Robotics, IEEE Internet of Things Journal, IEEE Transactions on Intelligent Transportation Systems, IEEE Transactions on Automation Science and Engineering

**Conference Reviewer:** International Conference on Learning Representation, IEEE/CVF Conference on Computer Vision and Pattern Recognition, IEEE International Conference on Robotics and Automation, IEEE/RSJ International Conference on Intelligent Robots and Systems

## Skills & Technologies

**Languages:** C++, C, Python, Html

**Technologies:** PyTorch, Matlab, ~~ETX~~