Xudong Yu

Personal Information

Gender	Male	Date of Birth	November, 1997
School	Harbin Institute of Technology	Discipline	Control Science and Engineering
Email	hit20byu@gmail.com	Address	Harbin, China

Education

2020–now **PhD student**, *Harbin Insitute of Technology*.
Focus on offline RL, causal inference, and causal RL

2018–2020 **Master Degree**, *Harbin Insitute of Technology*.
Focus on pose estimation, multi-sensor fusion, factor graph optimization, and ROS implementation

2014–2018 **Bachelor Degree**, *Harbin Insititue of Technology*.

Publications

2021 Xudong Yu, Changhong Wang, Multi-Sensor Fusion Localization with Factor Graphs for UGVs Under Adverse Conditions, Accepted by IEEE International Conference on Unmanned Systems

Experience

2021-now **Combining reinforcement learning and causal inference**.
I am thinking about the combination of causal inference and reinforcement learning, especially offline RL. My research goal is to solve the sample inefficiency and generalization problem.

2021–now **Deconfounding RL with observational data**.
I am working on the offline RL problem in POMDP settings, where unobserved confounders and covariate shift may exist. A key problem is the identifiability of causal effects with observational data. This work is in cooperation with Prof. Zhaoran Wang at Northwesten University.

2019–2021 **Multi-sensor fusion localization for UGVs**.
I cared about the extreme situations like GNSS-denied or visually-degraded environments. The major challenge is the identification of sensor validity and the mitigation of errorneous measurements. I proposed to utilize a multi-sensor fusion method with factor graph optimization to solve this problem.

Skills

Programming Python, C++, ROS, MATLAB
Tools Pytorch, Linux, LaTeX, Git