Department
Seminars

"A Bayesian Game in the Human-AI Society: The Interaction between Pedestrian and Two Types of Autonomous Vehicle"

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ABSTRACT

We propose a new type of reasoner in the autonomous vehicle (AV) decision-making process that supports the existence of two distinct types of AV. It addresses heterogeneous moral preferences of the traffic participants in the AV ethics. A static Bayesian game model is used to analyze strategic interaction between pedestrians and two types of AV. This static Bayesian game model not only prevents pedestrians from exploiting AV's predictable features, but also provides insights into improving transportation efficiency in mixed traffic environments.

Our work aims to develop feasible, practical, and effective mechanism designs to promote smooth and cooperative collaboration between humans and AI. We hope that the reasoner approach we propose can encourage manufacturers to openly advertise their operating ethical principles and enhance transparency. This article contributes to the ethics of Human-AI interactions, specifically in the underexplored area where moral values are in conflicts from different participants

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