

Interaction between human-piloted and autonomous vehicles

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Thesis Proposal

Autonomous vehicles are gaining momentum in recent years and, in near future, the number of autonomous vehicles acting in contact with people will increase. As consequence, autonomous vehicle should be able to perform a human-aware autonomous navigation. However, humans are not involved only as pedestrians, but also as drivers of human-piloted vehicles.

This proposal aims to design an autonomous navigation strategy considering the interaction between human-piloted and autonomous vehicles.

Activity Description

- Analysis of the state of the art of human-robot interaction;
- Design of a model describing the interaction between human-piloted and autonomous vehicles;
- Design of an autonomous navigation strategy;
- Implementation in ROS (Robot Operating System) of the autonomous navigation;
- Simulation of the approach.

Required Skills

- C++;
- Working in Linux Environments;
- ROS (optional).