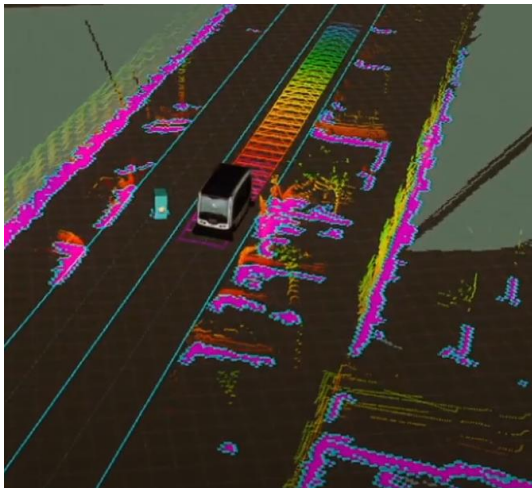


Interactive Machine Learning for Remote Assisted Autonomous Vehicles

Bachelor Thesis

In Autonomous Driving, the handling of corner cases remains a challenge that proves difficult to solve. Perspectivly, this task will get (partially) circumvented throught the assistance of a remote operator who monitors a fleet of vehicles. Often, the same problems keep reappearing (e.g. a specific construction zone) making the work of the remote assistance mundane and inefficient. This bachelor thesis aims at developing functions that support the remote operator by reusing solutions for prior similar problems.



The Topic

- You will implement different kinds of remote interaction
 - either for pathplanning, e.g. setting waypoints
 - or for computer vision, e.g. deleting objects
- You design methods for recognizing already previously solved problem cases by the remote operator
- You develop algorithms for reapplying and adapting past solutions of the remote operator to new problems.
- You will review existing literature of similar approaches and techniques to extend and improve your method

Your Skills

- You study Computer Science or a related discipline
- You are deeply interested in topics such as autonomous driving, machine learning and robotics
- You are able to read and write scientific texts in English
- You are fluid in Python and familiar with Linux
- You show an above-average degree of initiative and commitment as well as a thorough way of working

What You Get

- You get exciting insights into our research and gain valuable practical experience
- Latest hardware and software for your work
- Regular support and feedback
- Interesting Topic that can be adjusted to your interests
- We plan on publishing these results in IEEE journals with shared first-authorship

How To Apply

- Start: Immediately
- Write me an email at gontscharow@fzi.de with a short CV, your grades and a few sentences why you are intereseted and why you think this topic should be yours.
- After acceptance, we will set up a first meeting to discuss the details and to form the topic to your needs.