

Forschungspraxis

# Multiview-Consistent ROI Prediction

This work can be done in German or English

In autonomous driving, predicting Regions of Interest (ROI) allows the car to focus on areas critical to driving. A trained ROI prediction model is available. In an existing driving simulation setup, the ROI of six cameras is predicted separately. However, the ROIs are not independent if an object appears in multiple views. For example, a traffic light detected as an ROI in one front-facing camera should also be marked as an ROI in the other front-facing cameras if it appears in their field of view as well.

In this internship, the goal is to check whether ROIs appear in more than one view and to project the ROIs into other frames to make the ROI prediction consistent. Besides ensuring consistency, this can help improving robustness as the separate ROI prediction models can share their knowledge by projecting their predictions into the other camera frames.

## Prerequisites

- Linux and Python
- Basics of Computer Vision beneficial, but can also be learned during the internship

## Advisors

Christopher Kuhn, Markus Hofbauer