

Master's Thesis

# Out-Of-Distribution Detection in Visual Data for Autonomous Driving

In the foreseeable future, autonomous cars will continue to make mistakes that require human supervision to correct. To allow enough time for a human to take over, it is necessary to predict that a failure is about to occur. One approach is to try and detect input that is different from the distribution of the training set. For such input, the probability of failure is significantly higher as the car has not been trained to deal with it.

A promising out-of-distribution (OOD) detection approach are autoencoders. In this thesis, OOD detection should be investigated using driving images. Besides applying existing approaches to the more complex domain of urban scenes, OOD detection for specific tasks such as semantic segmentation should also be analyzed.

## Prerequisites

Experience with machine learning and Linux

## Advisors

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