

Bachelor's Thesis

Duckietown Autonomous Driving Pipeline - Structural Improvement

At LIS we want to use the Duckietown hardware and software ecosystem for experimenting with our reinforcement learning based learning classifier tables (LCT) as part of the control system of the Duckiebots: <https://www.ce.cit.tum.de/lis/forschung/aktuelle-projekte/duckietown-lab/>

More information on Duckietown can be found on <https://www.duckietown.org/>.

In this student work, we want to improve the overall image processing pipeline.

A first step is to analyse the image processing pipeline.

Afterwards the pipeline should be modified (adding, reordering stages) according to state of the art methods (literature research required) to improve the pipeline's accuracy.

Finally, the improvements should be measured and compared to before.

Advisors

Florian Maurer, Thomas Wild