Self driving toy car

Project for 3D Computer Vision lecture, summer term 2020

Alexander Barth

M. Sc. student computer engineering Heidelberg University dl248@stud.uni-heidelberg.de

Grewan Hassan M. Sc. student Heidelberg University g.hassan@stud.uni-heidelberg.de

Denis Münch
M. Sc. student
Heidelberg University
denis.muench@stud.uni-heidelberg.de

Royden Wagner

M. Sc. student computer engineering
Heidelberg University
royden-wagner@outlook.com

Abstract—This report describes the self driving car toy project done in the 3D Computer Vision lecture at Heidelberg University. The goal is to train neural networks so that the given car can drive autonomously on a track.

Index Terms—computer vision, autonomous driving, neural networks

I. GETTING STARTED

For getting started an operating system needs to be flashed onto the Raspberry Pi 3 B+ which is mounted into the car. Through the Raspberry Pi Imager the Pi OS Release 2020-05-27 was flashed onto the SD card. The OS is a port of Debian with the Raspberry Pi Desktop. In addition a ssh file and a wpa supplicant were stored in the boot partition.

II. EXPERIMENTS

A. Evaluation

III. CONCLUSION REFERENCES REFERENCES

 M. Abadi et al. "Tensorflow: Large-scale machine learning on heterogeneous distributed systems," arXiv preprint, 2016.