

JUST BETTER DATA

COLLECT DATA FOR AUTONOMOUS DRIVING THROUGH AN AI-DRIVEN, SMART, SECURE, AND PRIVACY CONFORM LOOP BETWEEN EDGE VEHICLES AND THE CLOUD.



Abstract

Projekttitel/ Project title:

just better DATA - efficient and characteristic data generation

Kurztitel/ Short title:

jbDATA

Einleitung/ Introduction:

Collecting data to develop and validate Machine Learning (ML) systems in Advanced Driver Assistance Systems (ADAS) and Automated Driving (AD) is often a daunting task. It involves gathering massive amounts of real-world data, which can be time-consuming, expensive, and full of unintended biases. These challenges impact the quality of data used to train neural networks, which is essential for the safe operation of such vehicles.

jbDATA addresses these issues head-on with an innovative approach. It begins by refining the data collection process at its source. Instead of amassing vast, unfiltered data, jbDATA's technology processes and evaluates data directly within the recording vehicles. This on-site processing means only the most relevant and high-quality data is selected for further use.

Ziel/ Aim:

The project "just better DATA" aims to develop and implement intelligent methods and tools to efficiently create representative data while paying attention to privacy and cybersecurity.

Methode/ Method:

Within the project's scope, a test fleet of five recording vehicles will be equipped with a defined reference sensor setup. They have the capabilities to run sophisticated scene-understanding algorithms. Relevant data is selected, anonymized, and sent to a central cloud platform, where the second half of the data loop analyses the data for gaps and patterns and redistributes new selection criteria. It is supplemented with synthetic data to ensure a comprehensive and representative dataset where necessary.

Ergebnis/ Result:

The three-year project will result in a pipeline that allows discovering and selecting only relevant and representative data for developing ADAS and AD. The methods shall be able to be deployed on larger test fleets and also end-user vehicles. They provide an efficient solution to the challenges of data collection in ADAS, ensuring that the ML systems are continuously retrained and improved on high quality data and representative of real-world scenarios, without the burden of excessive, irrelevant data.

Projektbeteiligte/ Project Participants:

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Projektpartner/ Project Partners:

- Continental Automotive Technologies GmbH
- □ Mercedes-Benz AG
- □ Valeo Schalter und Sensoren GmbH
- □ AVL Software and Functions GmbH
- AVL Deutschland GmbH
- □ FZI Forschungszentrum Informatik
- Luxoft GmbH
- □ b-plus GmbH
- □ Technische Hochschule Deggendorf

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