Head:	Dr. Anastasios Kouvelas / Dr. Michail Makridis
Topic:	**Analyzing the most complete dataset with autonomous vehicle trajectories and adapt it for traffic engineering purposes**
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Registration:	www.ivt.ethz.ch/en/studies/downloads/assignments.html#registration

Waymo Open Dataset (WaymoOD) is one of the most complete publicly available datasets for fully autonomous vehicles so far. The dataset consists of 1,000 driving records that tested on open-road by Waymo's fully autonomous driving system, with little intervention from safety drivers.

The goal of this project is to restructure and analyze this dataset towards traffic engineering topics.

The tasks are (depending on final format/group size):

- Analysis of dataset quality
- Extraction of AV trajectories
- Identification of car-following CF trajectories (leader-follower)
- Analysis of extracted CF concerning AV behavioral properties (stability, energy consumption, capacity)
- Calibration of existing CF models on AV data.

Links:	Waymo Open Dataset: https://waymo.com/intl/en_us/open/data/perception
Additional remarks:	Group work possible
Minimum credits:	9 / 11 or 24 ECTS (depending on project/thesis)
Recommended lectures:	Road Transport Systems (Verkehr 3), Transport Systems, Traffic Engineering
Additional information:	Good skills in Python programming language are required.