Head:	Prof. Dr. Eva Heinen
Topic:	**Study of ridership variations of e-scooters and ride-hailing between the local population and tourists in Malaga**
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Registration:	www.ivt.ethz.ch/en/studies/downloads/assignments.html#registration

Malaga in Southern Spain receives around 9 million visitors per year. Half of them visits the city between June and September. Since they concentrate in specific areas in the city, the pressure on transport systems is increased during these months. This study aims to explore the variations of ridership between the local population and tourists based on GPS-tracks of e-scooters and ride-hailing services. The findings of this analysis can help to design better mobility solutions for both the summer season (to manage the high seasonal demand caused by tourism) and the rest of the year. Further analysis of travel behaviour will allow the formulation of recommendations for public authorities focused on infrastructure enhancements and their optimal locations within the city.

Tasks:
- Literature review on the specifics of tourist vs. local resident travel behaviour
- Preprocessing of the GPS-data to prepare the analysis, differentiating between tourists and locals (tbd how to)
- Analysis of ridership variation (e.g., considering trip distances, trip destinations or temporal distribution of trips) between tourists and locals for different seasons: peak tourist season (June–September) and during the rest of the year
- Analysis of travel behaviour determinants for both tourists and locals
- Develop recommendations for public authorities based on the analysis (e.g., optimal placement of e-scooter stations, ride-hailing pickup zones for different seasons)
- Discussion of findings and policy implications and their implications for urban mobility planning in Málaga.

Links:	
Additional remarks:	Coding skills to process GPS data are helpful
Minimum credits:	8 ECTS
Recommended lectures:	• GIS