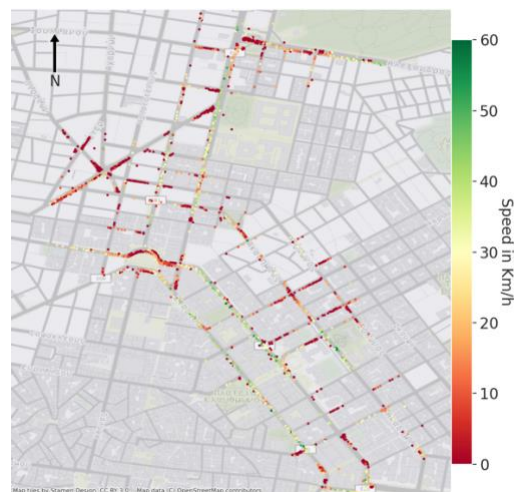


Master's thesis description

Drone videography is a relatively new method for collecting traffic data, providing an opportunity for understanding traffic scenes and behavior in detail. In this thesis, the student will take advantage of publicly available urban-scale data collected from drones to analyze and predict driving intentions. The urban traffic scene is highly complex, and thus, a methodological framework for using trajectory data from drone videography is required to be developed. This framework will develop representations of traffic scenes, e.g., on a dynamic graph representation. The dynamic graph representation will be enriched with static and dynamic network attributes, traffic agents, and their intentions. Since the data is unlabeled, new methods for identifying driving intentions must be developed. A major emphasis will be given to the application of machine learning (trajectory clustering) and deep learning methods (Graph Neural Networks) to achieve the objectives of this thesis.



Data source: <https://open-traffic.epfl.ch/>

Requirements:

- Motivated to conduct research in traffic data analytics.
- Prior experience in Python programming
- Understanding and experience with machine learning and deep learning methods
- Knowledge of Graph neural networks is a plus.
- Enrolled as student at TUM.

Interested candidates should send their **CV** and **motivation letter** (1 page each) to vishal.mahajan@tum.de