Description for the highway traffic dataset

The dataset contains historical 1-minute traffic observations (flow and speed) on the Motorway Control System (MCS) microwave sensors around Stockholm City. Particularly for this case study (see Figure 1), 8 portals in the south traffic flow direction are selected (selected portals in their downstream order E4S 58.140, E4S 57.820, E4S 57.435, E4S 57.055, E4S 56.780, E4S 56.490, E4S 56.160, E4S 55.620). Each portal consists of several sensors per line. The chosen path is part of the busiest route in Sweden, the E4-Essigne-bypass of Stockholm City. The dataset covers the morning peak (04:00 – 10:00) from 2021-06-01 – 2021-12-31. While 2022-01-01 – 2022-06-30 should be used for evaluating the model performance.

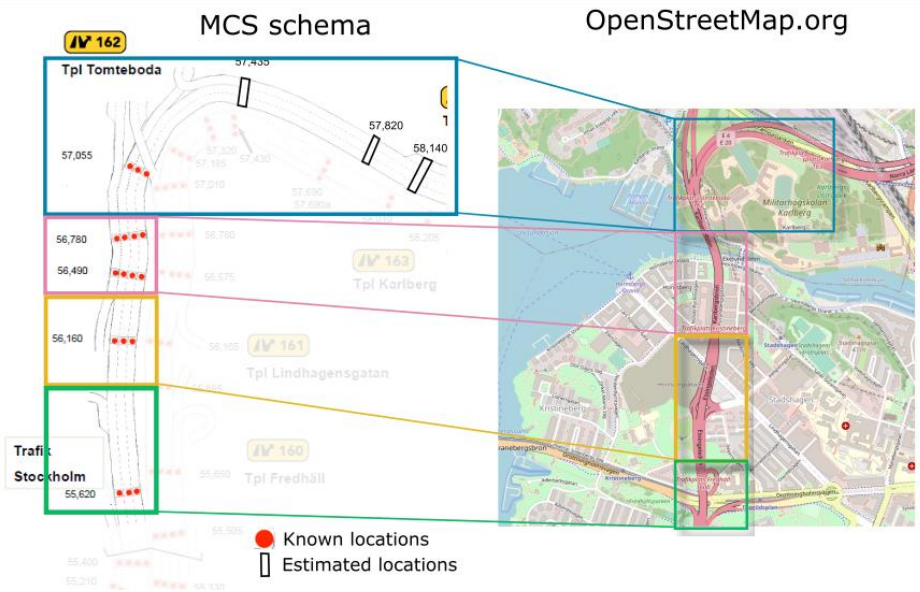

Figure 1 Shows the location of sensor portals in both schema (left) and real-world space (right)

There are two datasets provided, first for training and second for evaluation. Note that the evaluation dataset should not be a part of the training. Training dataset can be split into training and testing datasets according to your design. Please also note that you do not have to use a complete training dataset, and you can choose a sub-set. Anyway, at the end, you should provide a prediction performance of your final selected model using a complete evaluation dataset. This dataset shows how your model performs in the application.

Column	Data type	Description
DP_ID	Integer	ID of sensor at the portal location
PORTAL	String	ID of portal
Date	Integer	Date format YYYYmmdd
Time	Time	Time format HH:MM:SS
Interval_1	Integer	Index, interval 0: 00:00:00 – 00:00:59; 1: 00:00:01 – 00:01:59
Interval_5	Integer	Index, interval 0: 00:00:00 – 00:04:59; 1: 00:05:00 – 00:09:59
Interval_15	Integer	Index, interval 0: 00:00:00 – 00:14:59; 1: 00:15:00 – 00:29:59
Interval_30	Integer	Index, interval 0: 00:00:00 – 00:29:59; 1: 00:30:00 – 00:59:59
Interval_60	Integer	Index, interval 0: 00:00:00 – 00:59:59; 1: 01:00:00 – 01:59:59
SPEED_MS_AVG	Float	Average recorded speed from all the observations during 1-minute interval, in meters per second
FLOW	Integer	The number of observed vehicles during 1-minute interval

The dataset is extracted from the dataset provided by Trafikverket.

Please contact Matej Cebecauer at matejc@kth.se if you may find any problems or have any questions about the dataset.