

ROAD TRAFFIC DATASET

Description and data dictionary

The dataset represents an anonymized sample of road traffic data gathered from sensors installed on Italian roads from September 1st to November 6th, 2018.

The dataset contains the following columns:

Column of the dataset	Description
ID_SENSOR	Identifier of the sensor installed on the road. A sensor gathers data separately for the ascendant and descendant direction of a roadway. There is no distinction between lanes of the same roadway.
DIRECTION	Direction of the traffic flow.
DATETIME	Start time of the 15 minutes bin for which the traffic KPI are calculated.
NUM_VEHICLES	Number of vehicles registered by the sensor.
SPEED_MEAN	Average speed of the vehicles registered by the sensor.
SPEED_SD	Standard deviation of the set of speed registered for each vehicles.
EVENT	Category of an occurring nearby event that could affect the traffic.
LON	Approximate longitude of the sensor.
LAT	Approximate latitude of the sensor.

The traffic is usually classified in the 3 levels using the following rule applied on the average speed:

Traffic level	Sensor	Direction	Rule
GREEN (free flow)	1	A	average speed > 94 km/h
	1	D	average speed > 94 km/h
	3	A	average speed > 83 km/h
	3	D	average speed > 68 km/h
	4	A	average speed > 80 km/h
	4	D	average speed > 77 km/h
YELLOW (traffic)	1	A	89 km/h < average speed <= 94 km/h
	1	D	89 km/h < average speed <= 94 km/h
	3	A	78 km/h < average speed <= 83 km/h
	3	D	62 km/h < average speed <= 68 km/h
	4	A	75 km/h < average speed <= 80 km/h
	4	D	72 km/h < average speed <= 77 km/h
RED (high traffic)	1	A	average speed <= 89 km/h

	1	D	average speed <= 89 km/h
	3	A	average speed <= 78 km/h
	3	D	average speed <= 62 km/h
	4	A	average speed <= 75 km/h
	4	D	average speed <= 72 km/h