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Data Presentation of Lane-Changing Events Trajectories Using HighD Dataset

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Abstract : We present a descriptive analysis data of lane-changing events in multi-lane roads. The data are provided from The Highway Drone Dataset (HighD), which are microscopic trajectories in highway. This paper describes and analyses the role of the different parameters and their significance. Thanks to HighD data, we aim to find the most frequent reasons that motivate drivers to change lanes. We used the programming language R for the processing of these data. We analyze the involvement and relationship of different variables of each parameter of the ego vehicle and the four vehicles surrounding it, i.e., distance, speed difference, time gap, and acceleration. This was studied according to the class of the vehicle (car or truck), and according to the maneuver it undertook (overtaking or falling back).

Keywords : autonomous driving, physical traffic model, prediction model, statistical learning process
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