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Machine Learning Approach in Identifying Speed Breakers for Autonomous Driving: An Overview

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Abstract:

Advanced control systems for autonomous driving is capable of navigating vehicles without human interaction with appropriate devices by sensing the environment nearby the vehicle. Majority of such systems, autonomous vehicles implement a deliberative architecture that will pave the way for vehicle tracking, vehicle recognition, and collision avoidance. This paper provides a brief overview of the most advanced and recent approaches taken to detect and track speed breakers that employ various devices that allows pattern recognition. The discussion of various speed breaker detection will be limited to 3D reconstruction-based, vibration-based and vision-based. Moreover, the common machine learning models that have been used to investigate speed breakers are also discussed.

Keyword: 3D Reconstruction-Based; Vibration-Based; Vision-Based