A Data-Driven Tool for Evaluating Safety Benefits of CAV Deployment

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ABSTRACT

This paper presents ddSAFCAT, a data-driven safety assessment tool, which is proposed to assess the potential safety impacts of connected and autonomous vehicles (CAVs). The tool does not rely on conventional methods and includes features never before used in pedestrian safety analysis. The tool can be used for estimating safety improvements for a range of pedestrian safety countermeasures, including design changes, safety treatments, and other activities. ddSAFCAT allows for the estimation of safety improvements for different pedestrian geometries and traffic conditions, as well as for different levels of pedestrian demand. The tool is designed to be accessible to a wide range of users, including transportation professionals, traffic engineers, and emergency responders.

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