

Development of Accident Detection System with Traffic Imaging Using Artificial Intelligence

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Abstract: *Traffic accidents are one of the leading causes of fatalities and severe injuries, endangering the lives and health of individuals. These accidents might have a variety of reasons, some internal to the driver while others are external. When there is low visibility because of unfavorable weather conditions like rain, clouds, and fog, driving can be challenging and even dangerous. Using algorithmic Artificial Intelligence and approaches for clustering, this project aims to provide a summary of advanced methods for traffic accident predicting. The rising global vehicle accident rate has profound implications for all aspects of human life. Despite their importance, factors including causality assessment, traffic features, and the connections between different contributing components have typically been ignored. Moreover, the majority of the data on traffic accidents that is now accessible is used for data extraction and basic statistical analysis, which offers limited understanding of patterns and statistics. Through the identification of significant contributing factors and the development of preventative methods, this road accident information category seeks to lessen the severity of subsequent accidents. Machine learning algorithms are used to analyze data, identify hidden patterns, predict the impact of an event, and swiftly disseminate this information.*

Keywords: Road accident data, Artificial Intelligence, K-means Clustering, Analysis, Visualization, prediction

