

Samruddhi Mahamarg Accident Data Analysis using K-means Clustering

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Abstract: Road accidents are a major public safety concern especially on high-speed expressways. Samruddhi Mahamarg (Mumbai–Nagpur Expressway) has witnessed a significant number of accidents due to factors as high vehicle speed, driver fatigue & road conditions. This applies K-means clustering an unsupervised machine learning algorithm to analyze accident data and identify patterns & high-risk zones. By grouping accident data based on variables as time, location, severity & causes, research provides insights into accident-prone clusters. Findings help in understanding risk factors & support development of targeted safety measures, traffic management strategies & policy interventions

Keywords: Road Safety, K-Means Clustering, Accident Analysis, Samruddhi Mahamarg & Data Mining