

## عنوان مقاله:

A hybrid approach to examine the pattern of traffic crashes and drivers' fault status across the provinces of Iran

## محل انتشار:

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## خلاصه مقاله:

This paper focused on examining the existing patterns of car crashes and driver fault status at a provincial level. For this purpose, two clustering techniques were combined to analyze the data pertaining to 65127 crashes occurred during 2009 to 2012 in Iran. First, the hierarchical clustering (HC) was employed to classify the provinces into homogenous groups. Next, the province groupings as well as other variables were inputted into the latent class clustering (LCC) algorithm to cluster the crash data and investigate the crash pattern and driver fault status among the provinces. The Province group variable resulting from the hierarchical clustering was one of the effective variables in the LCC analysis. Furthermore, according to results of LCC, cluster 9 with domination of overturn collisions, drivers with Conditioned driving license and the crashes mostly being occurred on rural roads in the vicinity of non-residential/agricultural land uses; had the highest percentage of fatal crashes (5%) and at-fault drivers (99%) among the 12 clusters. Further discussions on crash patterns are provided. Finally, the combined use of HC and LCC could be considered as a preliminary analysis tool to provide a holistic view over crash patterns and identify most critical problems at a national level.

## کلمات کلیدی:

Data mining, Latent Class Clustering, Hierarchical Clustering, Traffic crashes

## لینک ثابت مقاله در پایگاه سیویلیکا:

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