

عنوان مقاله:

GIS based spatial analysis of pedestrian, Case study of Mashhad city

محل انتشار:

پانزدهمین کنفرانس بین المللی مهندسی حمل و نقل و ترافیک (سال: 1394)

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خلاصه مقاله:

According to the historical crash data, there is a growing concern about motor vehicle collisions involving pedestrians in Iran. Using pedestrian traffic accident records (2012-2013) from Mashhad department of Transportation as a case study, this paper applied spatial analysis of traffic accidents using geographic information system (GIS) tool. The paper aimed to identify clusters of injured pedestrians using network Kernel Density Estimation(KDE) method and ordinary Kriging analysis. The resulting geostatistical model, discovered critical threshold zones for higher injury pedestrian crash prone urban area in the case study. Considering the fact that the output are limited to the case study, the results identified by the two methods were found to be moderately similar in identifying hotspots. In addition, the study have shown that Kriging technique could be used for road safety as a promising tool. The developed criteria will assist the system managers not only in Mashhad, but also nationally, in better understanding the cause of the crashes and identifying appropriate operating strategies to improve pedestrian safety.

کلمات کلیدی:

pedestrian, GIS, Kernel Density Estimation, ordinary Kriging

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