

Presenting a Model for Predicting the State of Being Accident-Prone of Passages According to Neural Network and Spatial Data Analysis

Authors : Hamd Rezaeifar, Hamid Reza Sahriari

Abstract : Accidents are considered to be one of the challenges of modern life. Due to the fact that the victims of this problem and also internal transportations are getting increased day by day in Iran, studying effective factors of accidents and identifying suitable models and parameters about this issue are absolutely essential [1]. The main purpose of this research has been studying the factors and spatial data affecting accidents of Mashhad during 2007- 2008. In this paper it has been attempted to - through matching spatial layers on each other and finally by elaborating them with the place of accident - at the first step by adding landmarks of the accident and through adding especial fields regarding the existence or non-existence of effective phenomenon on accident, existing information banks of the accidents be completed and in the next step by means of data mining tools and analyzing by neural network, the relationship between these data be evaluated and a logical model be designed for predicting accident-prone spots with minimum error. The model of this article has a very accurate prediction in low-accident spots; yet it has more errors in accident-prone regions due to lack of primary data.

Keywords : accident, data mining, neural network, GIS

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