THE ARTIFICIAL ROAD ACCIDENT RATE PREDICTION ALONG AYER HITAM-BATU PAHAT, JOHOR, MALAYSIA ROAD

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Abstract

In Malaysia, deaths and injuries from road accidents have reached epidemic proportions. A variety approaches have been employed to study the relationship between geometric design of the road and accident trend. Design standards are applied by highway agencies to assure optimal operational and safety performance based on the anticipated use of roads in their system. Ideally, the application of the highest design standards could be expected to maximize safety. However, when operating under financial and time constraints, compromises on standards are inevitable. Therefore, a better understanding of the individualized singular and combined effects of roadway design features on safety is needed to guide decision makers and promote highway safety management efforts. The purpose of this on-going study is to predict the accident rate along Ayer Hitam-Batu Pahat, Johor, road. This road has been chosen because it has one of the highest accident rates in the country and is listed in the list of accident black spot. The study will cover more than 20 km of the road. This study trying to relates a factor of road access and road shoulder condition to accident rate. The data that needed in the study will be collected from Public Work Department of Malaysia (PWDM) Batu Pahat and Royal Malaysian Police (RMP) Batu Pahat. Artificial Neural Network (ANN) which is mimics the human brain's own problem solving process will be applied to analyze the collected data to obtain the result. It includes the collision type and the classification of the accident level. The result of the study will be contributed as a reference to the public especially for those who related to the planning and designing of this segment of road. The solution of the problem will be recommended in order to reduce accidents effectively and help to achieve the nationally set reduction targets.

Keywords*: Accident, Prediction, Artificial Neural Network (ANN).*