

## PEDESTRIAN CROSSING SPEED MODEL USING MULTIPLE REGRESSION ANALYSIS

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**Abstract:** Pedestrian signal allocates the appropriate time for pedestrian to cross safely a place where vehicle and pedestrian conflict are great. This study intends to formulate a model that will be used in determining the pedestrian speed using the available data that can be found in an actual situation in a signalized crosswalk. Four crosswalks will be observed to gather necessary data to come up with an appropriate model that can be used in other studies with regards to pedestrians. Speed-Density relationship will also be observed to find out whether the considered crosswalk adheres to the basic concept of Speed-Density relationship that the Highway Capacity Manual stated. These data includes: pedestrian volume, pedestrian crossing time, crosswalk dimension and actual crossing cycle time. After a thorough research and experimentation, the researcher found out several factors that may affect the speed of the pedestrians and the researchers came to conclusion that it is not merely by density. The dimension of the crosswalk affect the speed in terms that when the length of the crosswalk is lengthened; the tendency is to increase their speed as not to be caught up by the movement of traffic. In the course of our research, we conclude that the presented variables are not enough to explain the variation on speed. The researchers had formulated a model to predict the pedestrian signal but due to its low coefficient of determination, the researchers conclude that the model may not predict the correct pedestrian speed located outside the study area.

**Key Words:** pedestrian study, crosswalks, pedestrian characteristics