SEVERITY PATTERN OF TRAFFIC ACCIDENT VICTIMS
BY USING MULTINOMIAL LOGISTIC REGRESSION
(CASE STUDY: TRAFFIC ACCIDENT IN SURABAYA)

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ABSTRACT
Traffic accidents are one cause of death. It is quite high in Indonesia. These problems need attention to anticipate the increase of died number in traffic accidents. Therefore, this study obtain the factors that led to the severity of traffic accident victims. In this study the severity of the victims of traffic accidents are divided into three categories, death, serious injury, and minor injuries. To analyze the nominal scale dependent variable more than two categories using multinomial logistic regression. The results of modeling by using multinomial logistic regression are obtained two factors that influence the severity of traffic accident victims simultaneously, they are the type of accidents and the role of victims in the crash. Based on the model, it is known that the victims of traffic accident such as pedestrians, have the greatest chance of death on all types of accidents, on the kind of hit-and-back, hit-and-forward, hit the side, and others. While the role of the victim as the passengers have a chance of seriously injured and slightly injured the largest on any type of accident. The resulting model has accuracy of classification only 47.7%. Small classification accuracy due to lack of predictor variables that can represent for modeling patterns of severity of traffic accidents victims in Surabaya, or the models used were not appropriate.

Keywords: Logistic Regression, Multinomial Logistic Regression, Traffic Accident