

Probability Model Accidents of Motorcyclist Based on Driver's Personality

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Abstract : The increase in the number of motorcycle users in Indonesia is in line with the increase in accidents involving motorcycles. Several previous studies have shown that humans are the biggest factor causing accidents, and the driver's personality factor will affect his behavior on the road. This study was conducted to see how a person's personality traits will affect the probability of having an accident while driving. The Big Five Inventory (BFI) questionnaire and the Honda Riding Trainer (HRT) simulator were used as measuring tools, while the analysis carried out was logistic regression analysis. The results of the descriptive analysis of the respondent's personality based on the BFI show that the majority of drivers have the dominant character of neuroticism (34%), while the smallest group is the driver with the dominant type of openness character (6%). The percentage of motorists who were not involved in an accident was 54%. The results of the logistic regression analysis form a mathematical model as follows $Y = -3.852 - 0.288 X_1 + 0.596 X_2 + 0.429 X_3 - 0.386 X_4 - 0.094 X_5 + 0.436 X_6 + 0.162 X_7$, where the results of hypothesis testing indicate that the variables openness, conscientiousness, extraversion, agreeableness, neuroticism, history of traffic accidents and age at starting driving did not have a significant effect on the probability of a motorcyclist being involved in an accident.

Keywords : accidents, BFI, probability, simulator

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