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Abstract
Data mining has an excellent performance in dealing with a mass of data classification and prediction, according to the scholar studies before. Nevertheless, data mining is not a general method in transportation safety field, but multinomial logic model is one of the methods. In spite of this, when we use multinomial logic model to select the variable, it will result prediction biases or missing important information. Hence, this research uses the Rough set theory, a nonparametric statistic method that different from other general statistic method. This method was reported in 1982 by Z. Pawlak, a Polish scholar, and applies within many fields.

The research is about adaptation of rough set theory applying in traffic accidents. Decision tree has provided can apply in this field and has an excellent classification correct rate. The 32,709 samples are draw from the person concerned in 2003 Taipei's traffic accidents. This research uses rough set theory to develop classification rule and compares classification correct rate with multinomial logic model and decision tree.

From the result, rough set theory has an excellent performance in overall predict ability. That also provides the theory that can apply in the classification prediction rate in the traffic transportation safety field.
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