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Abstract
Acute appendicitis is a disease in common and causes acute abdominal pain which is easily mixed up by other abdominal or intestines and stomach diseases. Therefore, it is difficult to make a diagnosis due to the symptoms of acute appendicitis as diverse and changeable. The MANTRELS is an accessory tool for predicting the occurrence of acute appendicitis. In order to understand its efficacy in predicting Taiwanese patients, this study employs the rationale of the MANTRELS, designs a multi-tally system, and conducts an empirical study of validating it with Taiwanese cases. The findings support the efficacy of the MANTRELS created in 1986 while applied to analyze the 716 cases in this study.
In order to enhance the efficacy of predicting acute appendicitis, this study employs C4.5 and logistic regression to construct predictive models. The experiement results show that both the C4.5 model and logistic regression model achieve better performance than the MANTRELS does in terms of predicting acute appendicitis. C4.5 decision tree is more sensitive than logistic regression in terms of the size of training data and variable types.
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