

Comparison of the naive Bayes classifier and instance based learner in classifying upper gastrointestinal bleeding

ABSTRACT

Upper gastrointestinal bleeding is a medical emergence that results in high medical costs and death. Management of this disease requires ascertaining the cause of bleeding. The cause of bleeding is classified into esophageal and gastric causes. Based on health survey data, this study compares the accuracy of the naive Bayes classifier and an instance based learner in the classification of the cause of bleeding. The two classifiers are learned and trained on data collected from patients admitted for upper gastrointestinal bleeding. The naive Bayes classifier achieves a classification accuracy of 71% accuracy compared to 68% of the instance based learner.

Keyword: Naive Bayes classifier; Gastrointestinal bleeding; IBk classifier; Peptic ulcer disease.