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Abstract

The proactive data (e.g., inspection reports) is a source of rich information for prediction of occurrence of accidents. The main aim of the study is to use the proactive data properly along with reactive data (e.g., incident reports) retrieved from an integrated steel industry in building a prediction model to predict the occurrences of future incidents. Decision tree algorithms like C5.0, CART, CHAID, exhaustive CHAID, and ensemble techniques i.e., boosting have been implemented in order to predict the accidents. Results show that the C5.0 outperforms all other algorithms in terms of higher accuracy.