Abstract

Tracer analysis is one of the ways to increase a university's accreditation. Tracer studies, also known as graduate surveys, are beneficial for enhancing learning and developing university curricula. The period it takes graduates to secure employment is a measure of their quality. The sooner graduates obtain a job, the higher their perceived quality. Conversely, if it takes graduates longer to find employment, their quality is deemed lower. To gain new knowledge from the tracer study dataset regarding the relationship between university contribution and alumni capability in the job market, in this study, data mining techniques are used to determine what factors influence the length of time it takes college graduates to find employment. This classification model contains a total of 2288 data instances from the categorical type of dataset. The features are selected using chi-square. Two classification algorithms, Decision Tree and Support Vector Machine, are compared for the best model. This study also used hyperparameter tuning to improve accuracy. The results show decision tree produces higher accuracy compared to the support vector machine. The accuracy obtained from the decision tree model is 55.02% and increased to 65.06% after hyperparameter tuning. Meanwhile, the support vector machine brought an accuracy of 60.40% and increased to 62.15% after hyperparameter tuning. Factors that affect the classification of the alumni waiting period in getting a job in this study are sex, faculty of the study field, department of the study field, study period, company specification, company category, and work location.