

Abstract

The absorption of university alums into the workforce is one of the indicators that universities must pay attention to. One way universities pay attention to their alums is through tracer studies, where universities can evaluate the relevance of their curriculum to what is needed by the current workforce. One aspect that can be seen from tracer studies to assess alum competitiveness is the waiting time for alums to get their first job. This is because the faster alums get a job, the better the educational curriculum universities provide to their students. The study aims to apply machine learning to predict the waiting time for Telkom University alums to get their first job and determine what factors influence the waiting time for work. The algorithm used in this study is Decision Tree with hyperparameter tuning using Grid Search and the application of 3 types of feature selection as a comparison, namely Spearman's Rank Correlation, Chi-square, and Principal Component Analysis. This study produced the best model with a combination of Chi-square and hyperparameter tuning applications with an accuracy of 0,79, recall of 0,79, precision of 0,80, and F1-Score 0,75. Some features, such as the number of registered companies, how to search for a job, internship and practice experience, ethical competence, discussion, and IT skills, have the greatest influence on the model.

Keywords: Tracer study; Waiting Time; Correlation; Decision Tree; Feature Selection