

## **ABSTRACT**

Churn phenomenon commonly occurs in customer loyalty towards brand product or services. Customer churn has become significant issue in which any industry's practitioners would put on their best effort in order to press it. One of the commonly found churning problem has been shown to arise in organization scale, or else known as employee churn. Employee churn creates myriad and adverse effects to the organization as it correlates with unfairly workload distribution, great deal of money lost and also extra time needed to find a replace, which may result in the rise of customer dissatisfaction rate.

It is mandatory to understand who, where and why the employee is churning. Therefore, the purpose of this study is to present a descriptive model and to find the best model to predict employee churn. Accurate predictions model enables organizations to take action for preventing employee from churning. There are three popular classification models for prediction, namely naïve bayes, decision tree, and random forest. This study will compare performance of the aforementioned models by using HRIS from one of Indonesia's renowned telecommunication company. The data collected for the study spans for 2 years period, started from 2015 until 2017.

The findings from the study suggest that the best classification model is random forest due to its immense accuracy of 97.9%. The second-best method is naïve bayes with 97%, and the lowest accuracy of classification model is decision tree with 91%. A successful prediction model for employee churn is significantly needed in order to avert various negative impacts for the organization. Hence, the study concludes that the most reliable and accurate classification model to predict employee churn is random forest.

Keyword: Employee Churn, Classification, Descriptive Model, Decision Tree, Naïve Bayes, Random Forest, Prediction,