



PROJECT REPORT
PREDICTING EMPLOYEE ATTRITION USING
TABNET

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ABSTRACT

High employee turnover may threaten stability and productive working environment in a company. Not to mention, it is also more costly than retaining existing employees. The key to solve this problem is to predict employee attrition. Most of the previous researches utilized tree based model such as Random Forest or a simple deep learning model such as Multi-layer Perceptron. This project will include training a TabNet model for the prediction of employee attrition and comparison of its performance concerning metrics such as accuracy, precision, recall, and F1 score against both a Multi-Layer Perceptron model and a Random Forest model. This study anticipated that the TabNet model would produce results comparable to other models; however, TabNet demonstrated lower performance than both the Random Forest and Multi-Layer Perceptron models. Out of all the models, the Random Forest model performs the best in all key metrics, followed closely by the Multi-layer perceptron model. The results indicate that the tree based algorithms seem to be producing better outputs for predicting employee attrition in structured datasets. The findings of this research offer valuable insights for businesses aiming to improve employee retention strategies.

Keyword: Employee, Attrition, TabNet, Multi-Layer Perceptron, Random Forest

