**EMPLOYEE’S ATTRITION PROJECT REPORT**

***INTRODUCTION***

Employee attrition is one of the problems most organization is facing in recent and different organizations employ different techniques to curb this problem.

As a guide to reduce the incentives on those employees at risk of attrition, I have been tasked to accurately identify patterns and characteristics of those who leave and also predict if an employee is at risk of attrition.

***METHODOLOGY***

The Dataset was read into my jupyter environment and divided randomly into training and testing sets. The training consisted of 70% of the total records while the rest was used as the test sets.

The correlations of the target variable to other features was visualized using a heatmap. There I could clearly see that some features are more correlated to the target features than others as shown in the visualization.

Three Classification models were used to build the predictive model and I also try improve my model accuracy by applying some hyper parameter tuning and cross validation on all the classification algorithms deployed.

***ANALYSIS AND RESULT***

The Logistic Regression model gave an accuracy of 89.7% after tuning while the the Decision Tree model gave a higher model accuracy of 92.6% accuracy after tuning and the Random Forest model gave an accuracy of 86.1% accuracy.

Thus, the the Decision Tree algorithm gave the best accuracy out of the three classification models.

From our analysis too, we plotted a plot of how much the features contributed to employees attrition and among the highest includes; Monthly Income, Daily Rate and Monthly Rate, Age as can be seen from the features importance visualization.