PROJECT Code: 10281

Employee Performance Analysis

* The top 3 features effecting employee performances are:

1. Employee Environment Satisfaction (39.5%)
2. Employee Last Salary Hike Percent (33.3%)
3. Years since last promotion (16.7%)

Random Forest Classifier:

Accuracy: 91.67% The model performed slightly better, showing strong predictive power from my data.

XGBoost Classifier: Accuracy: 89.72% Although it slightly underperformed compared to Random Forest, it's still highly effective with near 90% accuracy.

Comparison:

The difference in accuracy between the two models is minimal (around 1.95%). Random Forest worked better with my dataset's structure

**Analysis and Insights**

* It was observed that the maximum accuracy was obtained when we used Random Forest with which was 91.67%.
* XGBoost Classifier also yielded an accuracy of 89.72%.
* The important features that are positively correlated are Environment Satisfaction, Last Salary Hike Percent & Worklife Balance. This means that if these factors increases, Performance Rating will increase. On the other hand, the features that are negatively correlated are Years Since Last Promotion, Experience Years at this Company, Experience years in current role & Years with Current Manager. This means that if these factors increases, Performance Rating will go down.
* We can conclude that the company should provide a better environment as it increases the performance drastically. The company should increase the salary of the employee from time to time and help them maintain a worklife balance. On the other hand, shuffling the manager from time to time will also affect performance.