Salifort Motors Data Project

Solving high employee turnover with data-driven insights

OVERVIEW

Salifort Motors has been experiencing high turnover, leading to increased costs in recruitment, training, and upskilling. Through exploratory data analysis and predictive models on employee survey data, this project aims to find insights into the reasons for the high turnover, and to build models that accurately predict which employees might leave.

KEY INSIGHTS

EXPLORATORY DATA ANALYSIS

It was found that employee satisfaction levels, last evaluation scores, hours worked, and number of projects had strong influence on employees who left.

Three clusters/demographics of employees who left were also identified:

1. Poor performers who tended to have weak last evaluation scores, few projects, and low work hours
2. Overworked, disatisfied employees who had too many projects assigned or worked too many hours each month
3. Strong performers who put in long hours and reflected that they were satisfied, but still left

PREDICTIVE MODEL

Random Forest and XGBoost models were trained and tested with the data, and were both found to have high performance and accuracy in predicting which employees had left based on their survey entries. The XGBoost model was marginally better.

PROJECT STATUS

Exploratory data analysis was conducted on the employee survey data.

Predictive models that aim to predict which employees might leave in future have been created.

Suggestions have been provided on further exploration of reasons for high turnover.

NEXT STEPS

To train new models to predict satisfaction levels and evaluation scores, using additional data.

Investigation into the company working culture, with overworking at the forefront.

Deeper exploration into the reasons for high-value, satisfied employees leaving the company.