Sailfort Motors Employee Turnover Rate Analysis Project

Executive Summary Report

Overview

The human resources unit give the data analytics team of Sailfort Motors survey data and asked the team to analyze which factors affect retention rate.

Problem

The high turnover rate by employees caused concerns that the company is not treating employees the way they should. So, the data team would need to analyze what are the factors that could be playing a role on employees leaving the company.

Solution

Through a categorical data analysis based on a logistic regression model and a decision tree classification model, the latter model was more accurate on predictions and also gives a signal that employee satisfaction level, projects worked, tenure, and the last employee evaluation have affected turnover rate..

Details

METRICS:
The decision tree classifier have a 98% accuracy score while the logistic regression model have 82% accuracy score, so there are less errors in the decision tree.

IMPORTANCE:
Satisfaction level is the most important variable to predict whether an employee left the company or not. Followed by last evaluation, number of projects worked, and tenure.

	gini_importance
satisfaction_level	0.556154
last_evaluation	0.138959
number_project	0.107401
average_monthly_hours	0.044235
tenure_years	0.153076
department_accounting	0.000174

Next Steps

We recommend Sailfort Motors to not overwork employees and compensate if they need to work overtime, evaluatie employees by quality of contribution rather than quantity of work hours, and hold a company-wide discussion about work culture and improve it.