

Salifort Motors

Employee Retention Project

ISSUE / PROBLEM

Salifort Motors wants to understand what drives employee churn and increase retention.

What’s likely to make an employee leave the company?

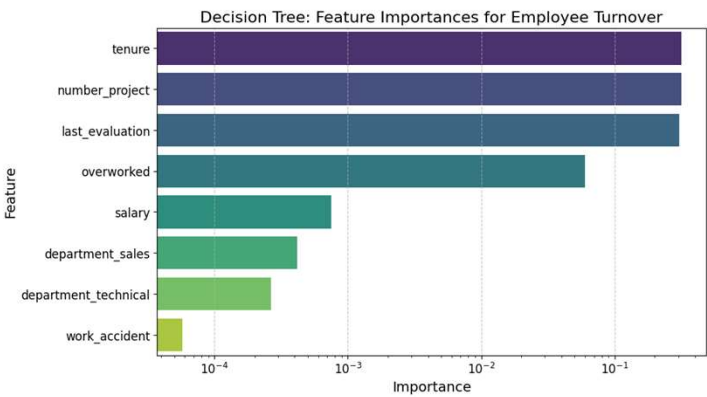
RESPONSE

Either a logistic regression or tree-based model can be utilized to predict the outcome variable, ‘left’, which is categorical.

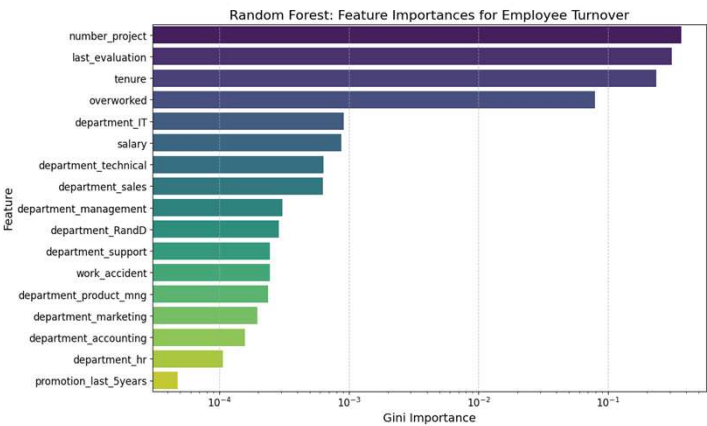
After analyzing the scores of all models built, the second iteration of the Random Forest model was the highest overall performer.

IMPACT

The model aims to predict whether an employee will leave, and additionally, identify which factors are most relevant to retention. These insights will aid the HR team in making data-informed decisions to improve retention rates.



The plot of feature importances above indicate the most important Decision Tree model features are “tenure”, “number_project”, “last_evaluation” and “overworked”, with “salary” also having moderate importance.



The plot of feature importances above indicate the most important Random Forest model features are “tenure”, “number_project”, “last_evaluation” and “overworked”, with “department_IT”, “salary”, “department_technical” and “department_sales” having moderate importance.

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KEY INSIGHTS

- Cap the number of projects an employee can work on.
- Considering promoting employees who have higher tenure, potentially at the four-year mark.
- Conduct additional investigation into why employees who have been with the company for four years display such low satisfaction.
- Look into methods to reward employees who work longer hours, or cap the number of hours.
- Hold company and team-wide discussions on work culture to brainstorm methods to improve it.
- It’s odd that high evaluation scores predominantly come from those working such significant hours. This should not be the case; investigation into better evaluation methods, such as those that are based on effort or for more work.