

Salifort Motors

Employee Retention Project

ISSUE / PROBLEM

The purpose of this project is to understand what variables affect employees' retention in Salifort Motors.

The problem needs to be solved is what's likely to make the employee leave the company?

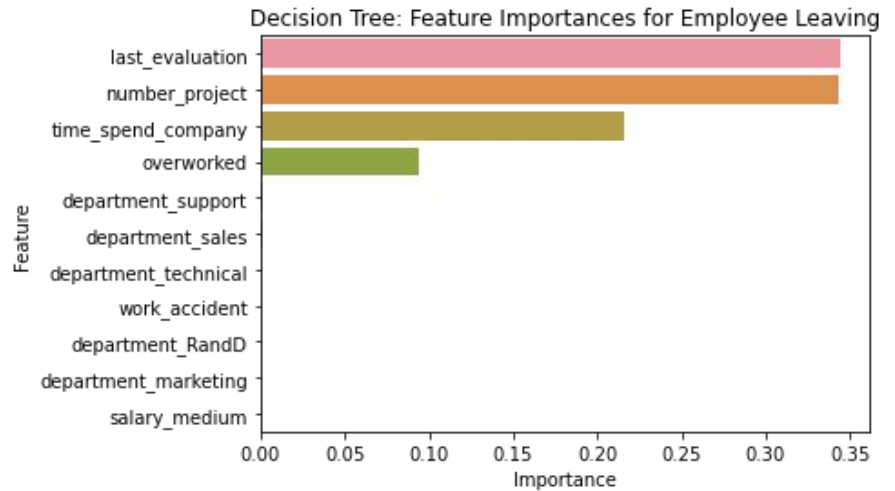
RESPONSE

The data team built tree-based machine learning models since the target variable we are going to predict is categorical.

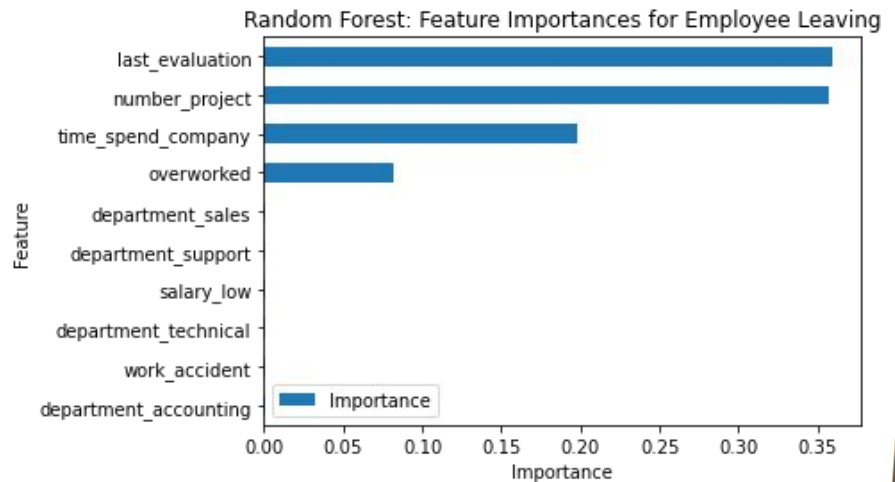
The result shows that random forest model slightly outperforms the decision tree model.

IMPACT

The model can assist in predicting whether an employee is likely to leave. It also highlights the most crucial variables contributing to employee turnover. The results will provide Salifort Motors' senior leadership team with additional insights, enabling them to formulate solutions for this issue.



Barplot above shows the most relevant variables: `last_evaluation`, `number_project`, `time_spend_company` and `overworked`.



In the random forest model above, `last_evaluation`, `time_spend_company`, `number_project`, and `overworked` have the highest importance. These variables are most helpful in predicting the outcome variable, `left`.

INSIGHTS/NEXT STEPS

- Cap the number of projects that employees can work on.
- Consider promoting employees who have been with the company for at least four years, or conduct further investigation about why four-year tenured employees are so dissatisfied.
- Either reward employees for working longer hours, or don't require them to do so.
- If employees aren't familiar with the company's overtime pay policies, inform them about this. If the expectations around workload and time off aren't explicit, make them clear.
- Hold company-wide and within-team discussions to understand and address the company work culture, across the board and in specific contexts.
- High evaluation scores should not be reserved for employees who work 200+ hours per month. Consider a proportionate scale for rewarding employees who contribute more/put in more effort.