# Salifort Motors

Employee retention project

## ISSUE / PROBLEM

Salifort Motors aims to improve employee retention and answer the following question:

**What can make an employee leave the company?**

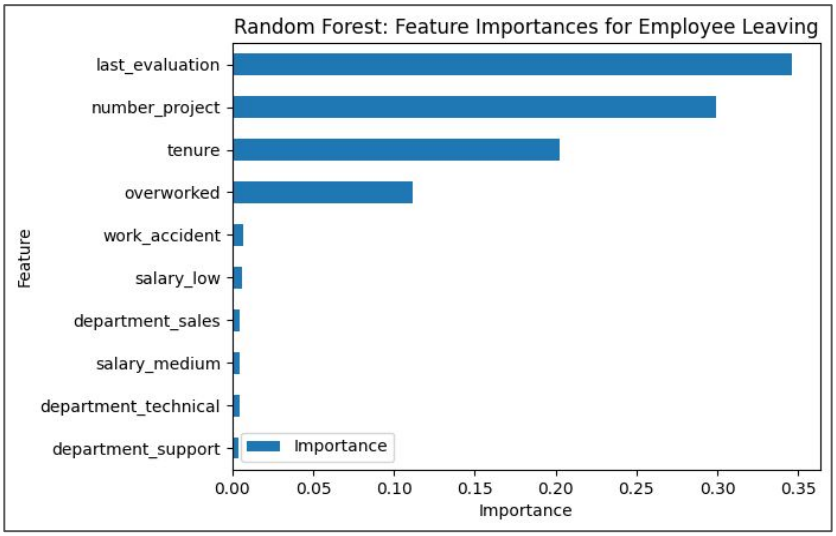
## RESPONSE

Since the variable we are trying to predict is categorical, the team can build either a logistic regression or a tree-based machine learning model.

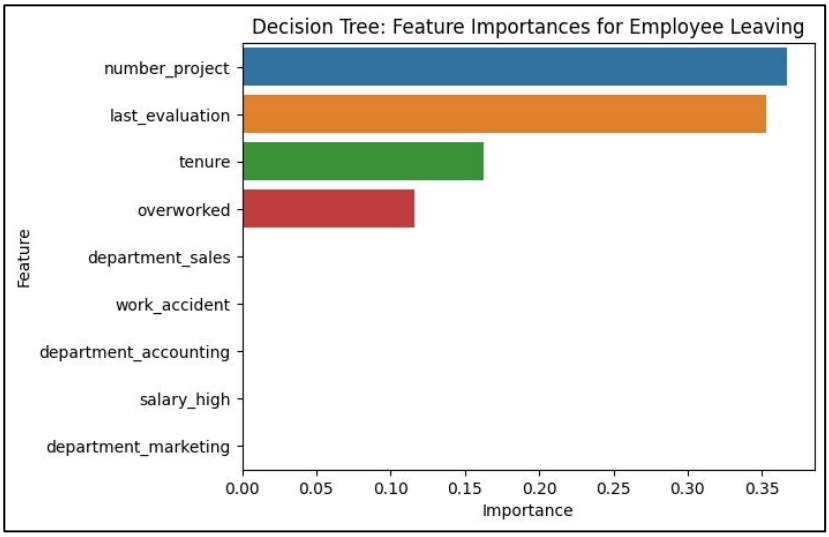
The **random forest model** is slightly superior to the decision tree model.

## IMPACT

This model helps predict whether an employee will leave the company and identify which factors are most influential. These insights can help HR make decisions to improve employee retention.




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




**Barplot above shows the most relevant variables by Decision Tree model: *'number_project', 'last_evaluation', 'tenure'* and *'overworked'*.**

## KEY INSIGHTS

- Enforce a limit on the number of projects assigned to each employee.
- Evaluate the possibility of promoting employees who have completed a minimum of 4 years with the company.
- Explore options such as incentivizing employees for working longer hours or removing the requirement for extended work hours altogether.
- Facilitate company-wide and team-specific discussions to gain insights into the prevailing work culture and address any concerns comprehensively.
- Implement a balanced evaluation system that does not exclusively reward employees who work over 200 hours per month. Consider a proportional scale to recognize and reward employees based on their contributions and efforts.