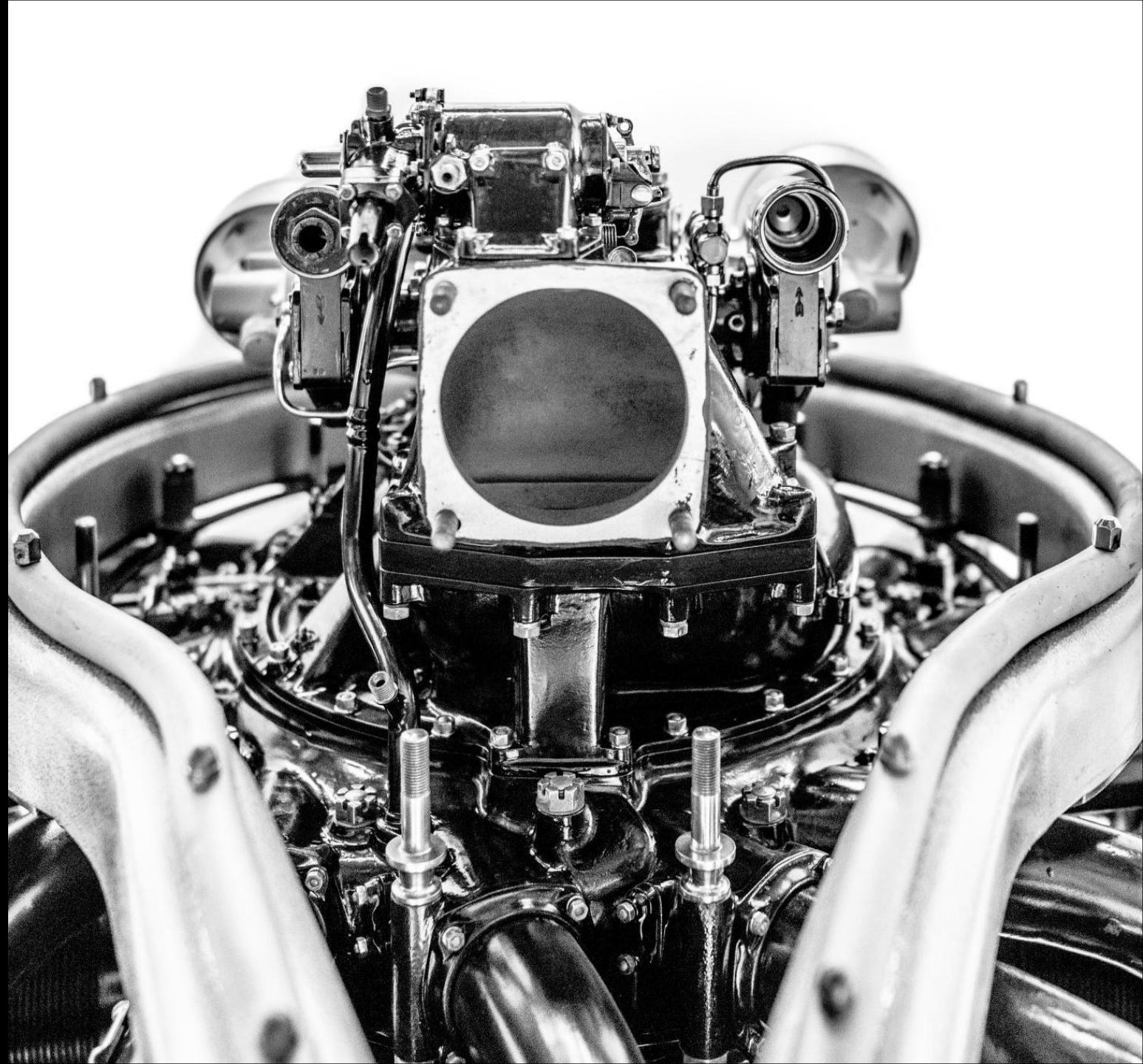
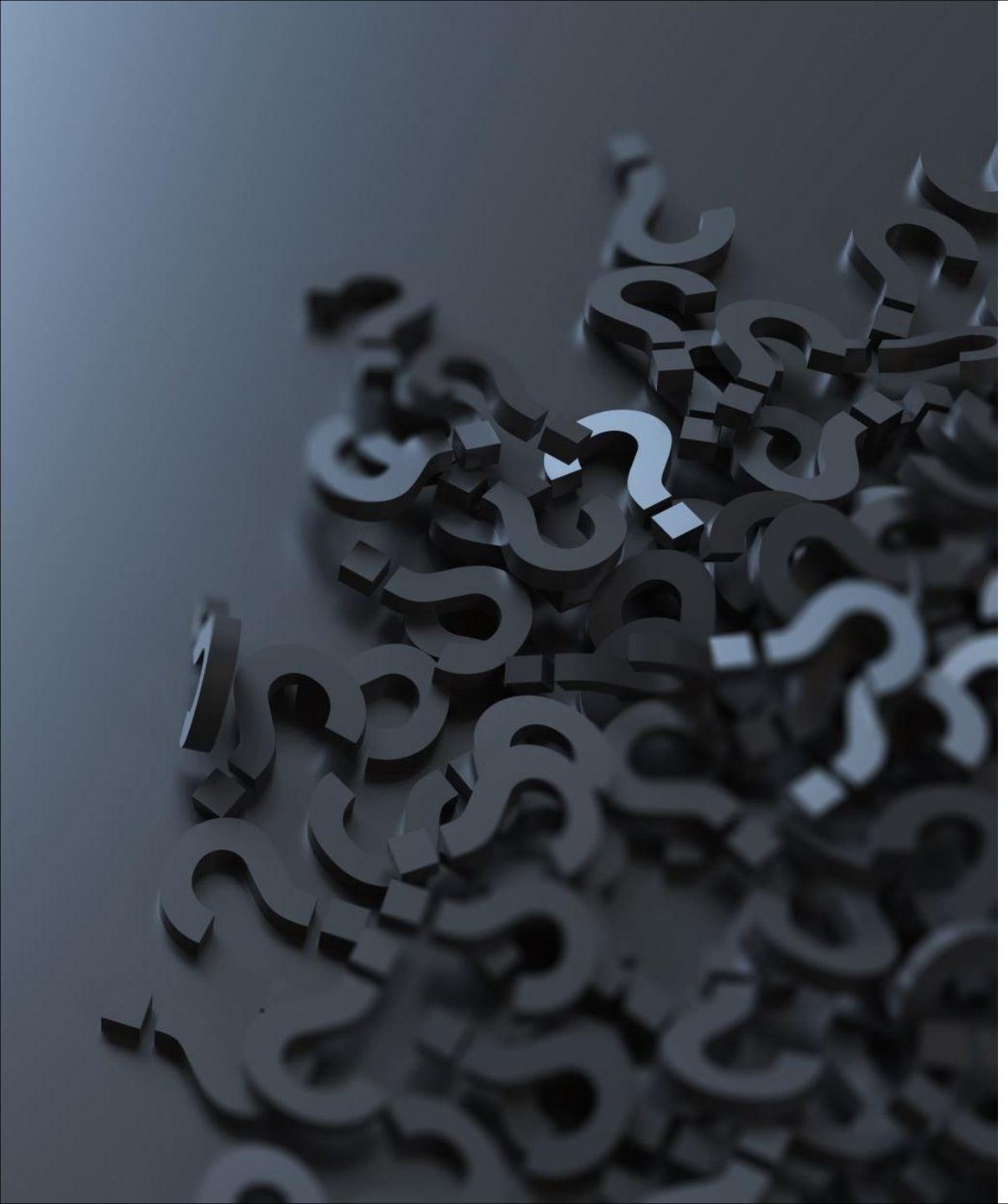
SALIFORT MOTORS

Employee Retention Project



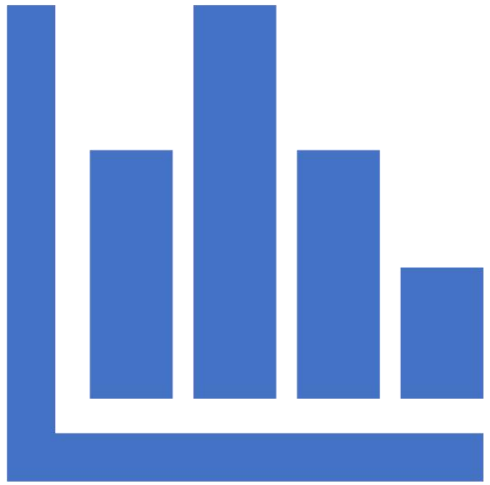


ISSUE / PROBLEM

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

What's likely to make the employee leave the company?

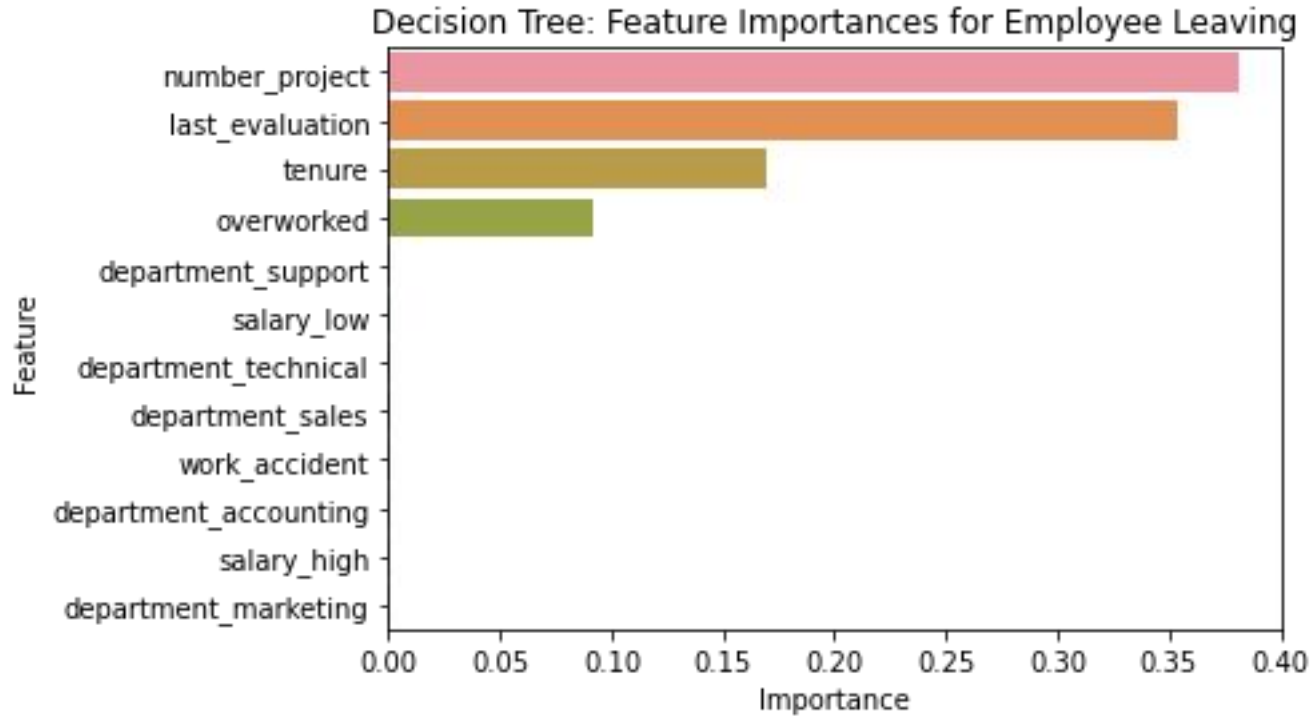
RESPONSE



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

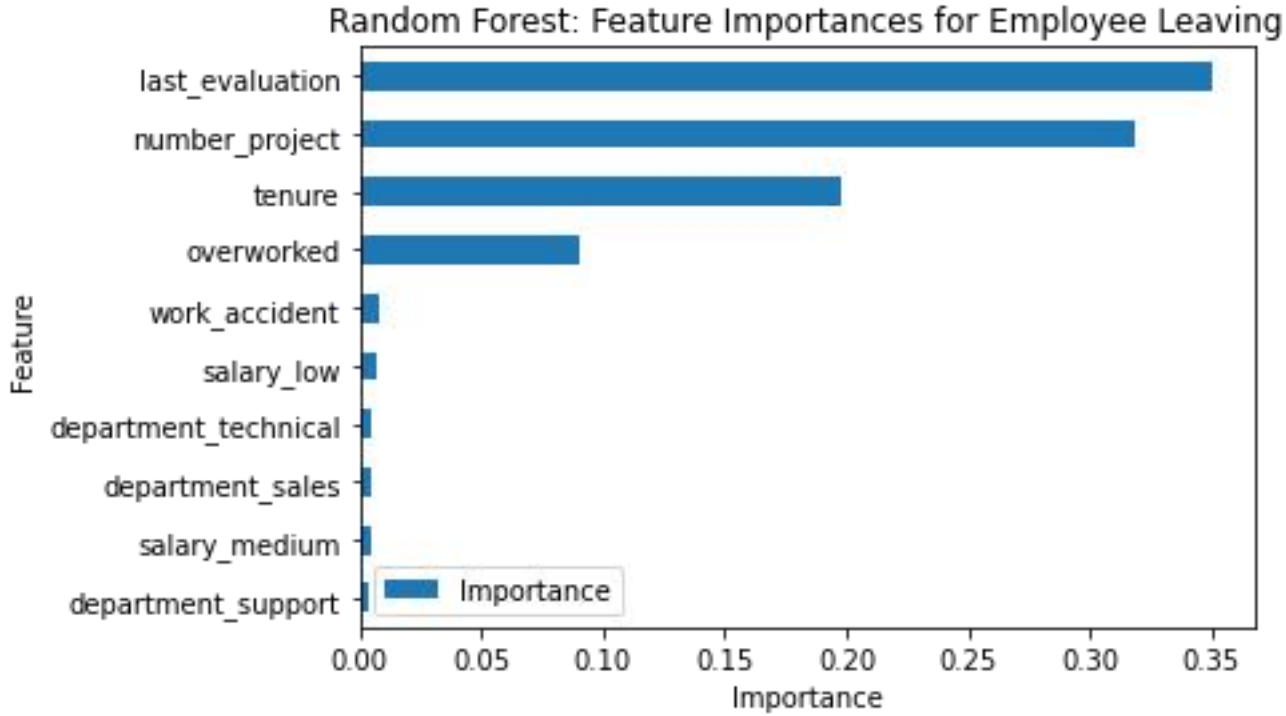
The random forest model slightly outperforms the decision tree model.

RESULTS



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

RESULTS



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

IMPACT

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

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.