Salifort Motors

Employee Retention Project

ISSUE / PROBLEM

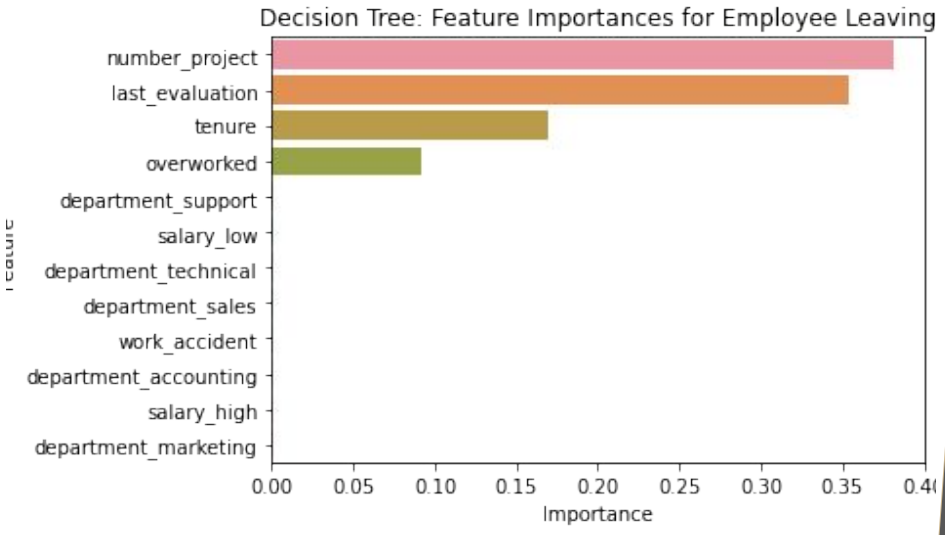
Salifort Motors seeks to improve employee retention and find the factors that influences employee Attrition.

RESPONSE

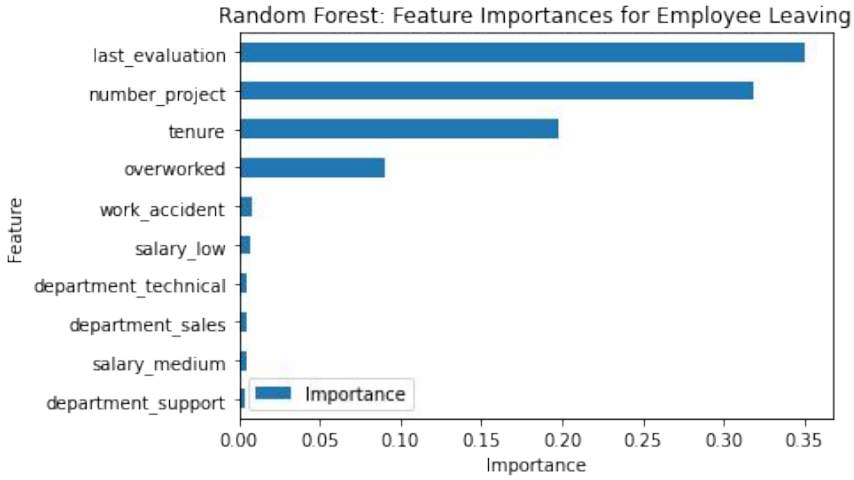
Since the variable we are seeking to predict is categorical, the team could build either a logistic regression or a tree-based machine learning model.
The random forest model slightly outperforms the decision tree model.

IMPACT

This predictive model assists in determining if an employee will depart and highlights the most influential factors. Such insights empower HR to enhance employee retention through informed decision-making.



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



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*`.

INSIGHTS/NEXT STEPS

To enhance employee retention, stakeholders could consider the following recommendations:

- Limit the number of projects per employee.
- Promote employees with four or more years of tenure or investigate their dissatisfaction.
- Offer incentives for longer hours or eliminate mandatory overtime.
- Ensure clarity on overtime pay policies and workload expectations.
- Conduct discussions to improve company culture.
- Implement fair evaluation criteria irrespective of monthly work hours.