Salifort Motors

Employee Retention Project

ISSUE / PROBLEM

Salifort Motors aims to improve employee retention by addressing a key question:

What factors are most likely to cause an employee to leave the company?

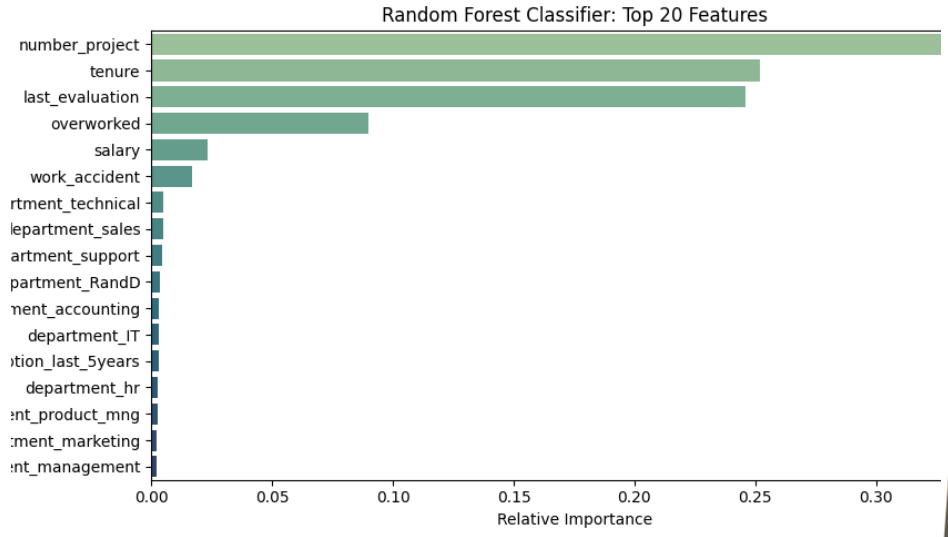
RESPONSE

As the target variable is categorical, the team can use a tree-based machine learning model for prediction.

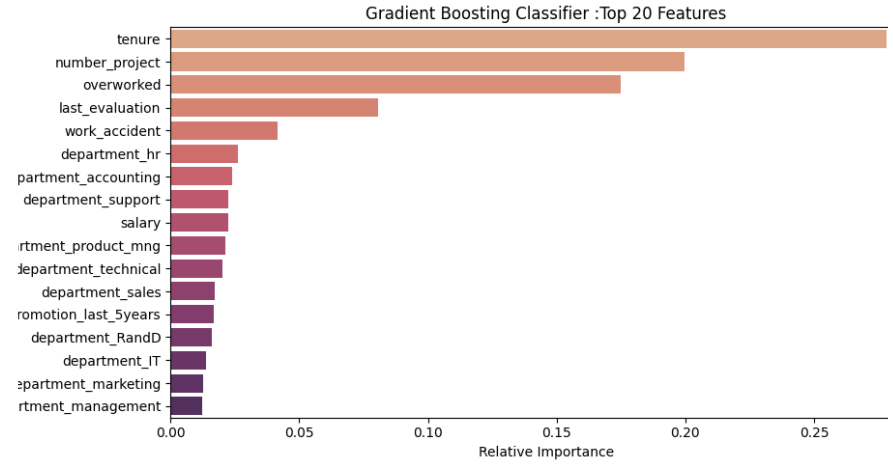
Among the models tested, the Gradient Boosting model performs slightly better than the Random Forest model.

IMPACT

This model predicts whether an employee is likely to leave and highlights the most influential factors. These insights can support HR in making informed decisions to improve employee retention.



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



In the Gradient Boosting Classifier above, *'tenure', 'number_project', 'overworked',* 'last_evaluation' and 'word_accident' have the highest importance. These variables are most helpful in predicting the outcome variable, *'left'*.

INSIGHTS/NEXT STEPS

1. Investigate why employees with four-year tenures report such low satisfaction.
2. Set a limit on the number of projects an employee can handle.
3. Either reward employees for working longer hours or avoid expecting them to do so.
4. Make sure employees are aware of the company's overtime pay policies. If expectations around workload and time off are unclear, communicate them more explicitly.
5. Facilitate company-wide and team-level discussions to better understand and improve the work culture, both generally and in specific teams.
6. Avoid reserving high evaluation scores only for those working over 200 hours per month. Instead, consider a more balanced system that rewards effort and contribution fairly.