Salifort Motors

Employee Retention Project

ISSUE / PROBLEM

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

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

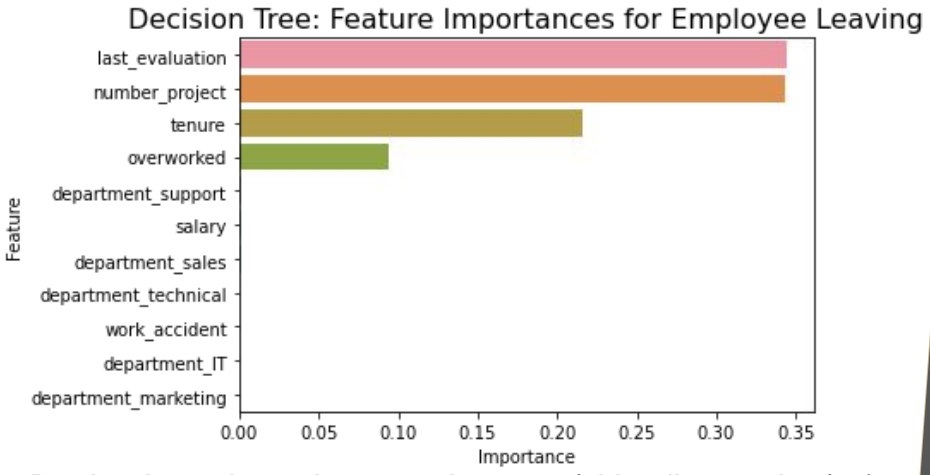
RESPONSE

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.

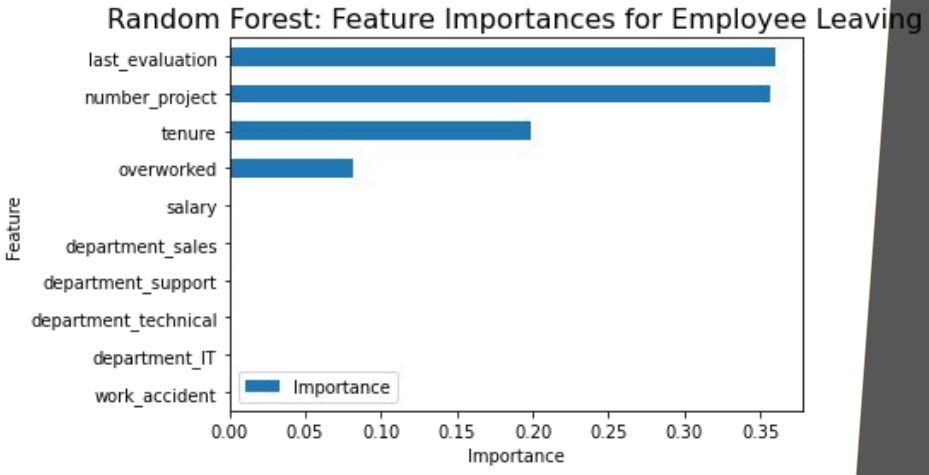
The random forest model slightly outperforms the decision tree model.

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.



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

- Number of projects cutoff point
- Promoting employees who have been at the company for at least 4 years or check reason for satisfaction for employees with 4 year tenure
- Do not require employees to work longer hours or compensate them accordingly
- Make clear about expectation about workload, possibly inform about overtime pay policies.
- Company wide and in teams discussion about company work culture, look into specifics for each team.
- Evaluation scores should not be reserved for employees with 200+ hours per month. Rescale for employees who contribute more.