Salifort Motors

Employee Retention Project

ISSUE / PROBLEM

Salifort Motor is looking for a model to retain their employers and answer the following question:

Which features are likely an employee to leave the company?

RESPONSE

The variable '*left*' was the one that we used to predict in our models. Since it's a categorical, the team decided to build a logistic regression or tree-based machine learning model.

From our results, decision tree outperforms random forest,

IMPACT

The model determines when a employee will leave or not. It also determines the most important features why an employer leave the company. These insight will help the HR department to take actions in employe retention.

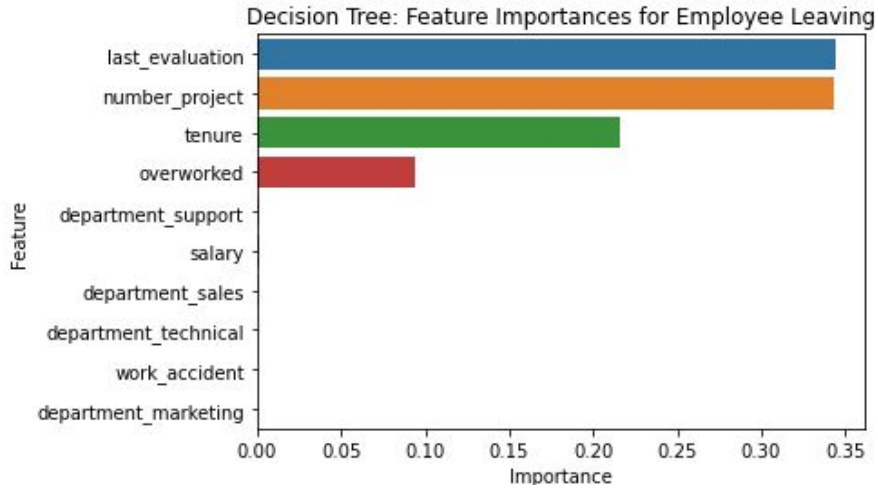
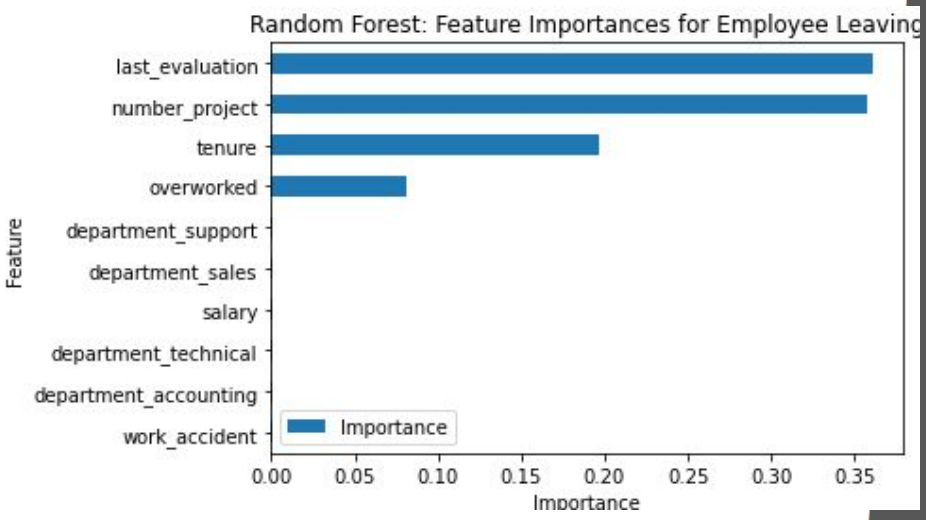


Image Alt-Text Here **Barplot above shows the most relevant variables: *'last_evaluation', 'number_project', 'tenure'* and *'overworked'*.**



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*`.

KEY INSIGHTS

- Regulate the number of project that they are working on.
- Consider promoting those employers that have been working more than four years or investigate why they're dissatisfied.
- Choose between regulate the working hour per month or award those who work more than the idea average working hours.
- Inform your employees about the policies of your working culture, if they're going to get paid for overworking. If the expectations around workload and time off aren't explicit, make them clear.
- 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.