Salifort Motors

Employee Retention Project

ISSUE / PROBLEM

- Salifort Motors aims to respond to the following query and increase employee retention:

- What is likely to cause an employee to quit their job?

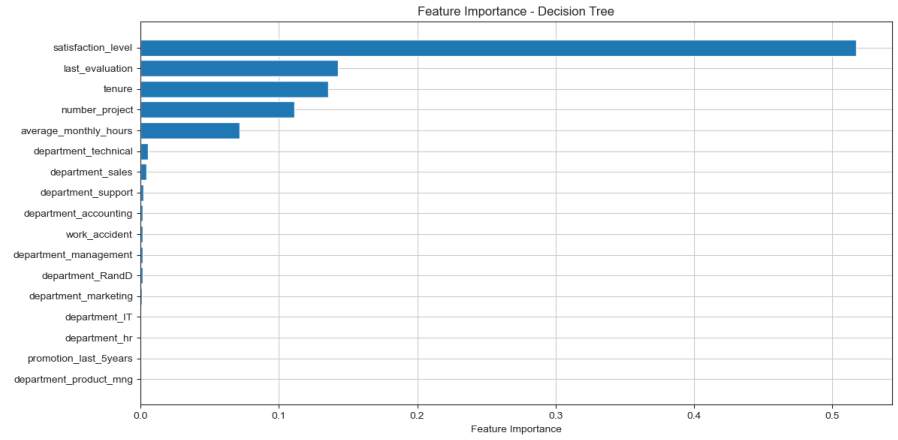
RESPONSE

The team may create a tree-based machine learning model or a logistic regression model because the variable we are trying to predict is categorical.

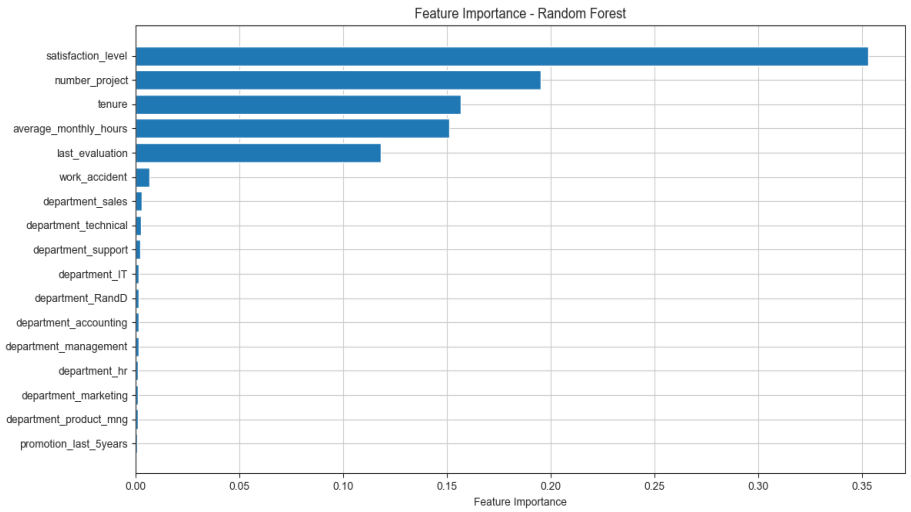
The decision tree model performs marginally better than the random forest model.

IMPACT

This approach assists in determining the most important elements and predicting whether an employee will leave. HR can use these insights to inform actions that will increase 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

- Limit how many projects staff members can work on.
- Consider giving promotions to staff members who have worked for the company for at least four years, or look into the reasons behind the high level of discontent among four-year tenured personnel.
- Employees should be rewarded for putting in more hours or not required to.
- Tell staff members about the company's overtime compensation regulations if they are unfamiliar with them. Make it obvious if there aren't any stated expectations around workload and vacation time.
- Organize team and company-wide talks to comprehend and address the work culture of the organization, both generally and in particular situations.
- Employees who put in more than 200 hours a month shouldn't be the only ones who receive high assessment scores. To reward workers who put in more effort or contribute more, think about using a proportionate scale.