

ISSUE / PROBLEM

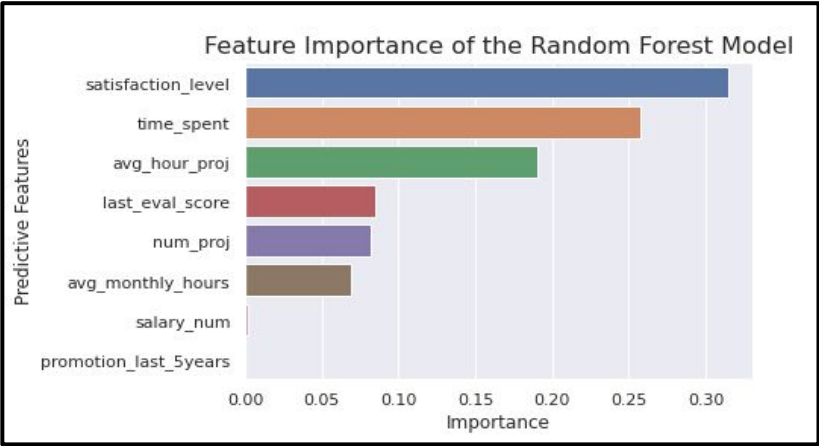
In an initiative to improve employee retention, Salifort Motors would like to answer the following question: **what is likely to make an employee leave the company?**

RESPONSE

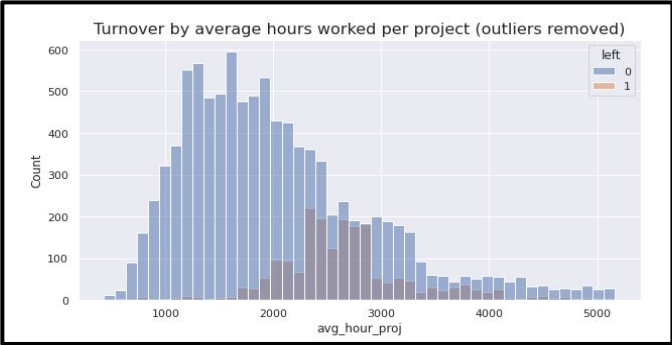
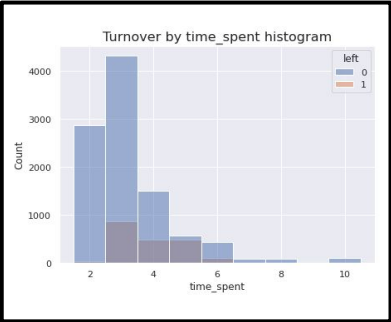
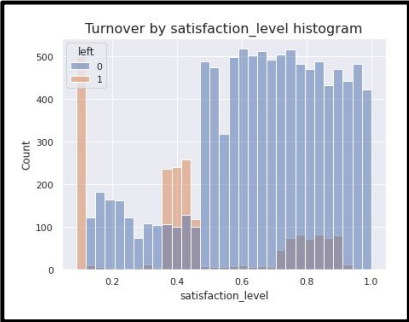
To predict a categorical variable, whether the employee would leave, a logistic regression model and a random forest classification model are constructed. The random forest model turns out to be better performing.

IMPACT

The random forest model performs very well to predict employee turnover (with an accuracy of 99%) and especially those who will leave (recall 93%). Feature importance analysis can help HR implement measures to improve employee retention.



The most relevant predictors for an employee to leave the company are: satisfaction level, time with the company (years), and avg, hours worked per project.



Distribution of left employees by the most relevant predictors

KEY INSIGHTS

The most relevant predictors of employee turnover are **satisfaction score**, **how long has the employee been with the company (in years)** and **average hours worked on each projects**. Other contributing factors that are less predictive are the evaluation score, total number of projects worked on and average monthly working hours.

Recommendations:

- 1. Invite employees for job satisfaction interviews with the HR department. Keep confidential.
- 2. Reach out to employees who have completed their 4th anniversary with company. Perhaps they feel stagnated in their career and need either promotion or job rotation to learn something new.
- 3. Closely monitor the working hours employees spend on each project. Proactively reach out to employees who are overworked to gauge their wellbeing, or reach out to those have been working for one project for a very long time to see if they are still happy and if they would like a change.
- 4. For the future survey design, instead of a generic satisfaction level, we could break it down according to topics, such as work-life balance, feeling supported from colleagues, job alignment with one's ambition/potential, holiday/flexible work policy, etc.