Predicting Employee Longevity through Supervised Machine Learning Models

Cross-Validated Tuned Random Forest

Project Overview

Salifort Motors is looking to understand their employee turnover rates in the context of employee satisfaction, evaluation, hours, number of projects, salary, department, work accidents and years with the company.

Details

Key Insights

- Satisfaction level, years spent with company and projects per hour are the best predictors of of employee retention
- The departments with the highest satisfaction level are management, IT, and RandD. These departments are more likely to have employee longevity.
- The departments with the higher proportion of years with company are Sales, and Support. Due to the observed correlation these departments are likely to have high turnover rates.
- Lastly the Technical department has the highest project per hours ratio which suggests that these employees will stay with the company.
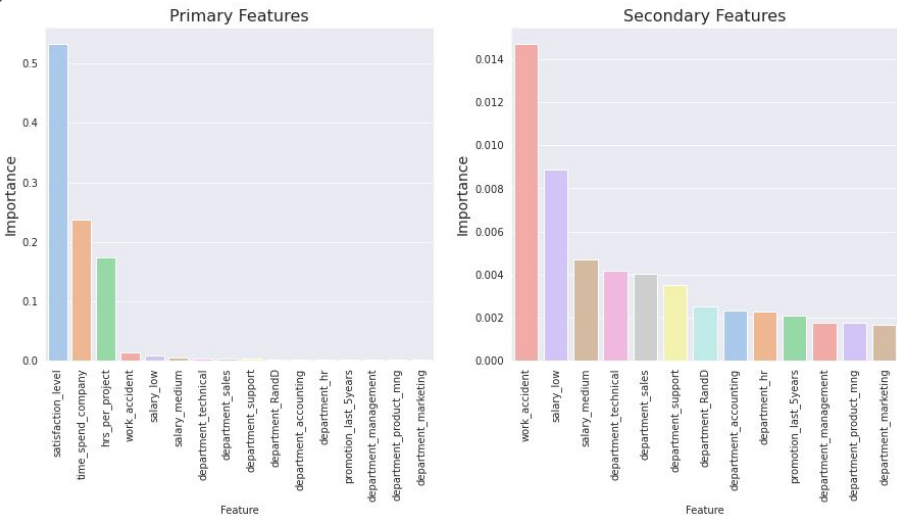
Feature importance for determining employee retention

Next Steps

We know Salifort Motors is looking to invest time and resources into training their employees, however, they do not want to use resources on employees that are bound to leave the company soon. Therefore we recommend to invest into the IT, RandD and Technical departments, as these department show strong correlation with with employee retention.