Salifort Motors Employee Turnover Executive Summary

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Overview

Salifort Motors is an fictional alternative energy vehicle manufacturer with 100,000 employees.

Problem

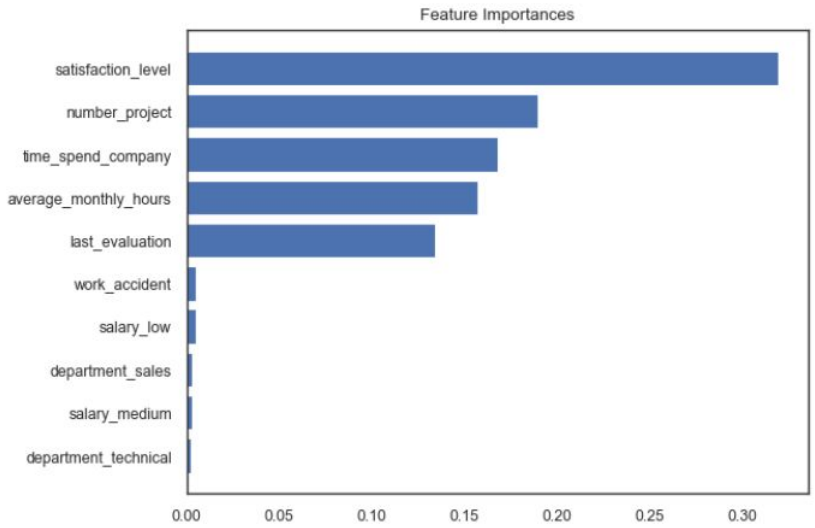
Salifort Motors has been experiencing high employee turnover, and wants to find a way to increase employee retention. Leadership and human resources wants a model to predict factors that lead to an employee leaving the company.

Solution

A random forest classification model was constructed to show what features had the most impact in determining whether or not an employee would leave the company.

Details

- Preliminary data analysis was performed showing that employee valuations and number of projects contributed to employees feeling stressed.
- Exploratory data analysis clean up duplicate entries, fix grammatical errors, changed data types for modeling
- The random forest model performed well on the dataset without the need for tuning or feature transformations, showing satisfaction level and number of projects as the top features.
- The lowest score the model had was a 0.92 recall score.



	Model	Accuracy Score	F1 Score	Precision Score	Recall Score
0	RF_Train	1.000000	1.000000	1.000000	1.000000
1	RF_Test	0.985827	0.955844	0.989247	0.924623

Next Steps

Consider redistributing project priorities among employees or assign employees to multiple projects to reduce burnout.
Ensure employees are working a stable amount of hours to reduce the risk of low performers.
Could include feature transformations for tenure, overworked vs underworked, years without pay increase.