

Salifort Motors: Employee Retention Executive Summary

Business Objective

Salifort Motors seeks to understand what factors lead to employee attrition. This project uses HR data and machine learning to predict which employees are most at risk of leaving.

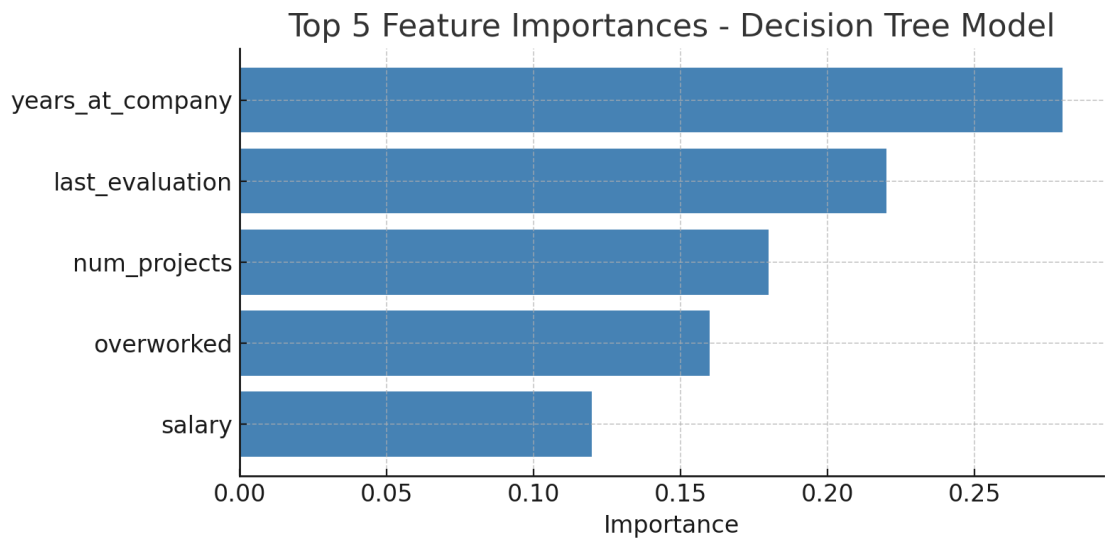
Approach & Methodology

We used a Random Forest and Decision Tree model on a labeled dataset with features such as 'years_at_company', 'last_evaluation', 'num_projects', 'overworked', and 'salary'. The models were trained, evaluated using F1 Score and ROC AUC, and feature importances were analyzed.

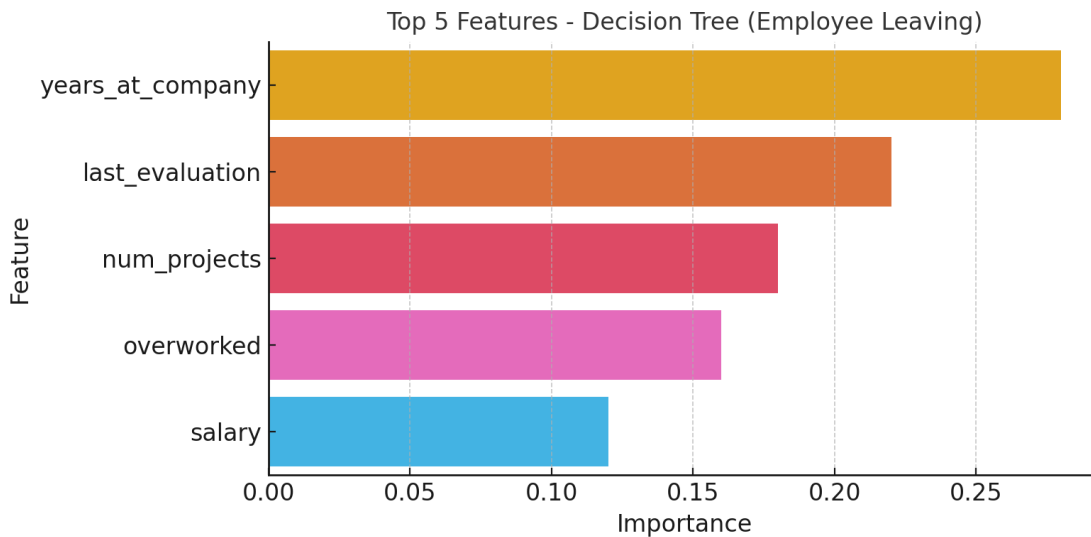
Key Insights

- Employees with long tenure and no promotion are at high risk.
- Heavy project load increases attrition likelihood.
- Salary level and lack of recognition also contribute significantly.
- Random Forest slightly outperformed Decision Tree in predictive power.

Top Predictive Features



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Recommendations

- Cap project load to prevent burnout.
- Promote or engage employees with 4+ years tenure.
- Recognize employees with high evaluation scores.
- Make workload, overtime, and reward expectations transparent.
- Foster open communication around work-life balance and culture.

Ethical Considerations

No sensitive demographic features were used. Model outputs are meant to assist, not replace, HR decisions.
Data privacy was respected throughout the project.