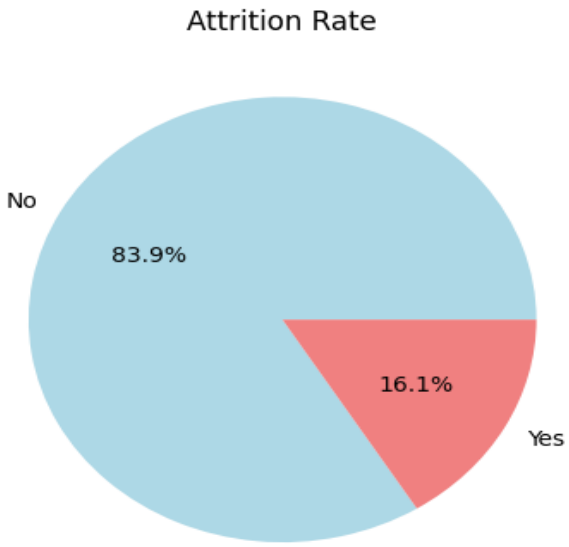
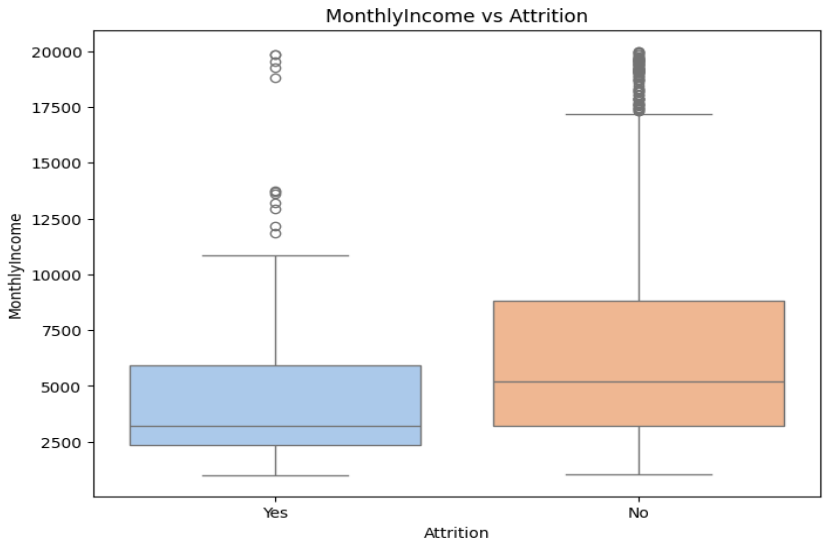
Description of the Plots

1.



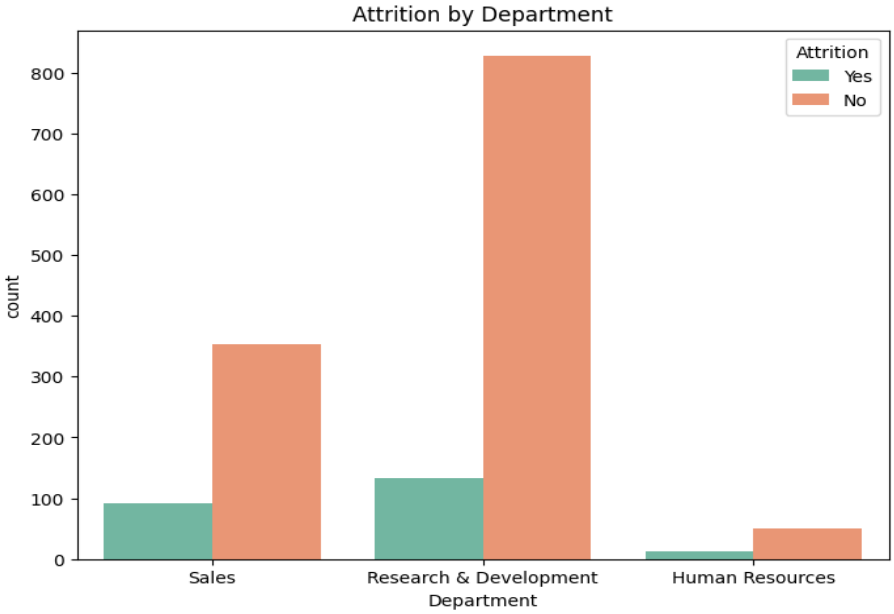
Only 16% of employees leave, indicating an imbalanced dataset that biases the model toward predicting No.

2.



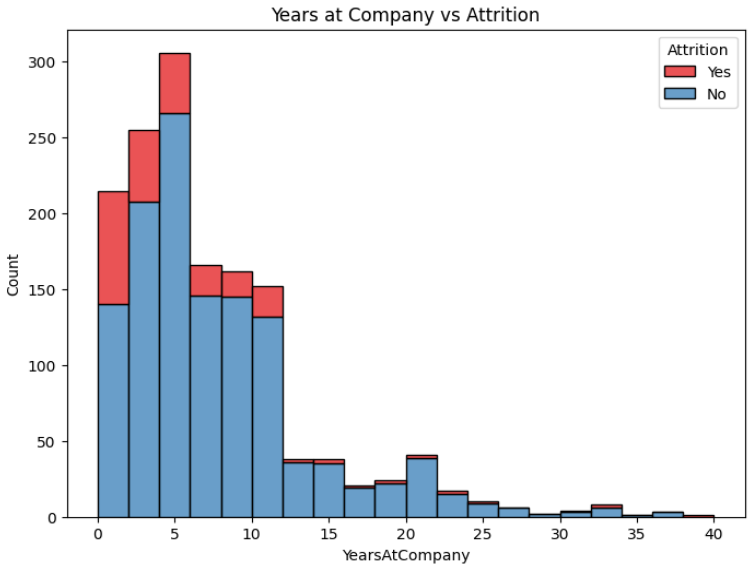
Employees who leave have lower salaries (median ~4,000 vs 7,000), highlighting salary as a key attrition driver.

3.



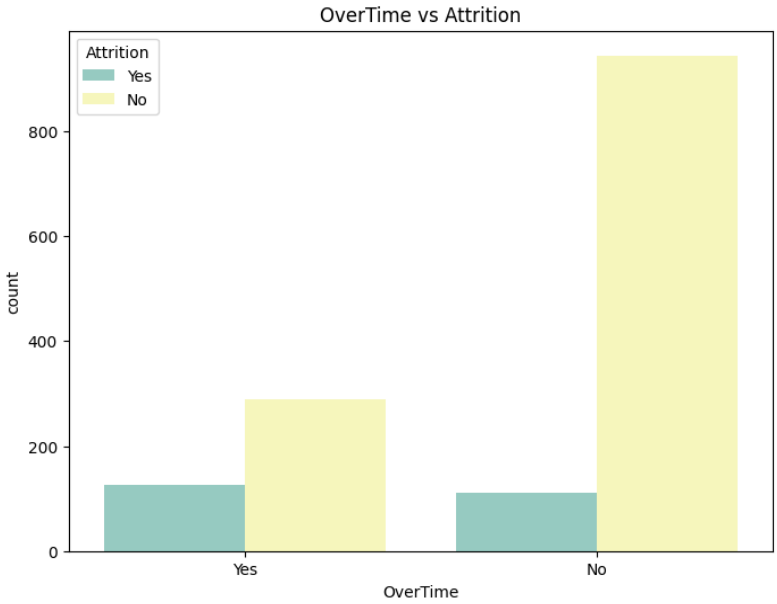
Sales department has the highest attrition rate (~20%), suggesting a need for retention strategies like bonuses.

4.



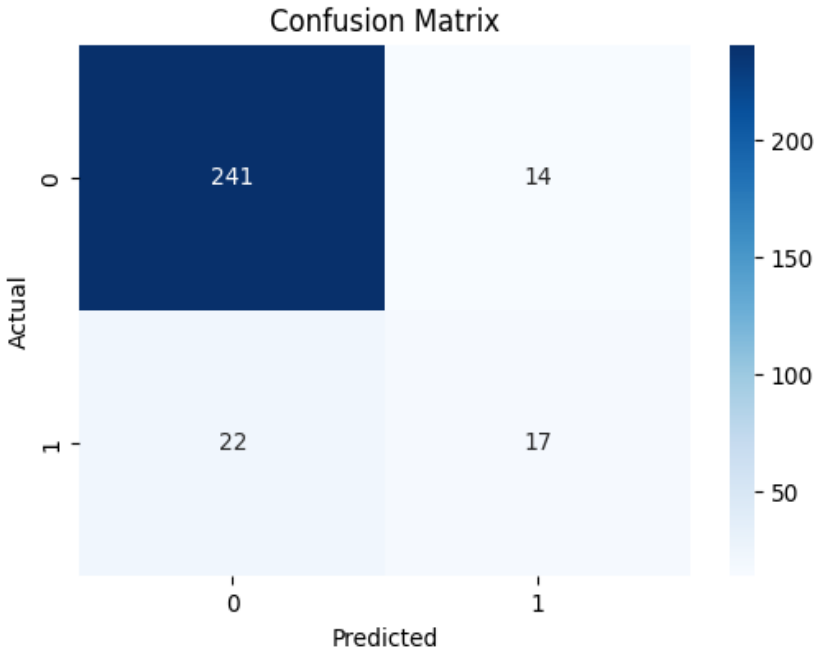
Employees with <5 years at the company (especially 0–3 years) are more likely to leave, indicating onboarding issues.

5.



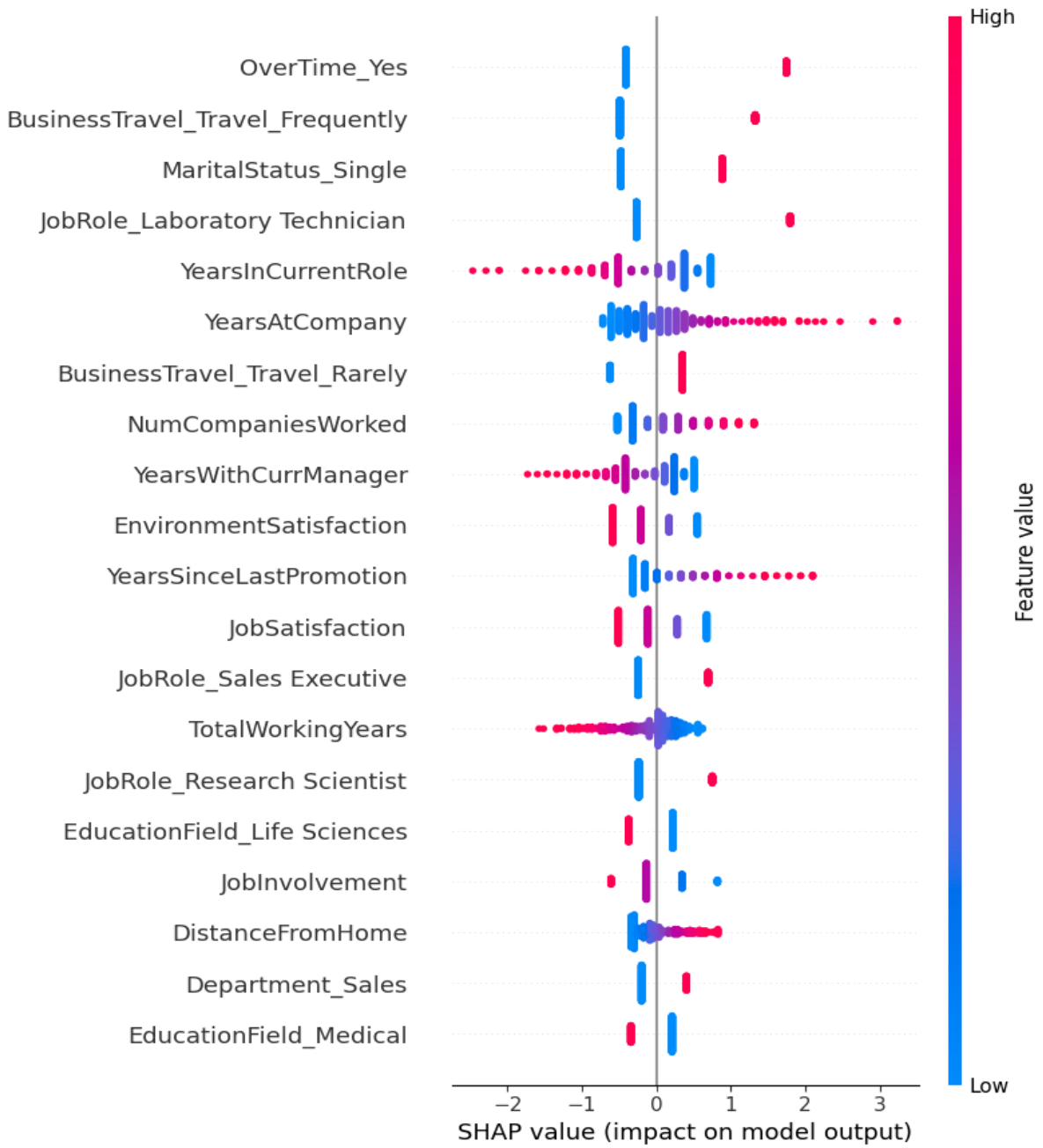
Overtime work is associated with higher attrition (~30% for OverTime=Yes), suggesting workload reductions could help.

6.



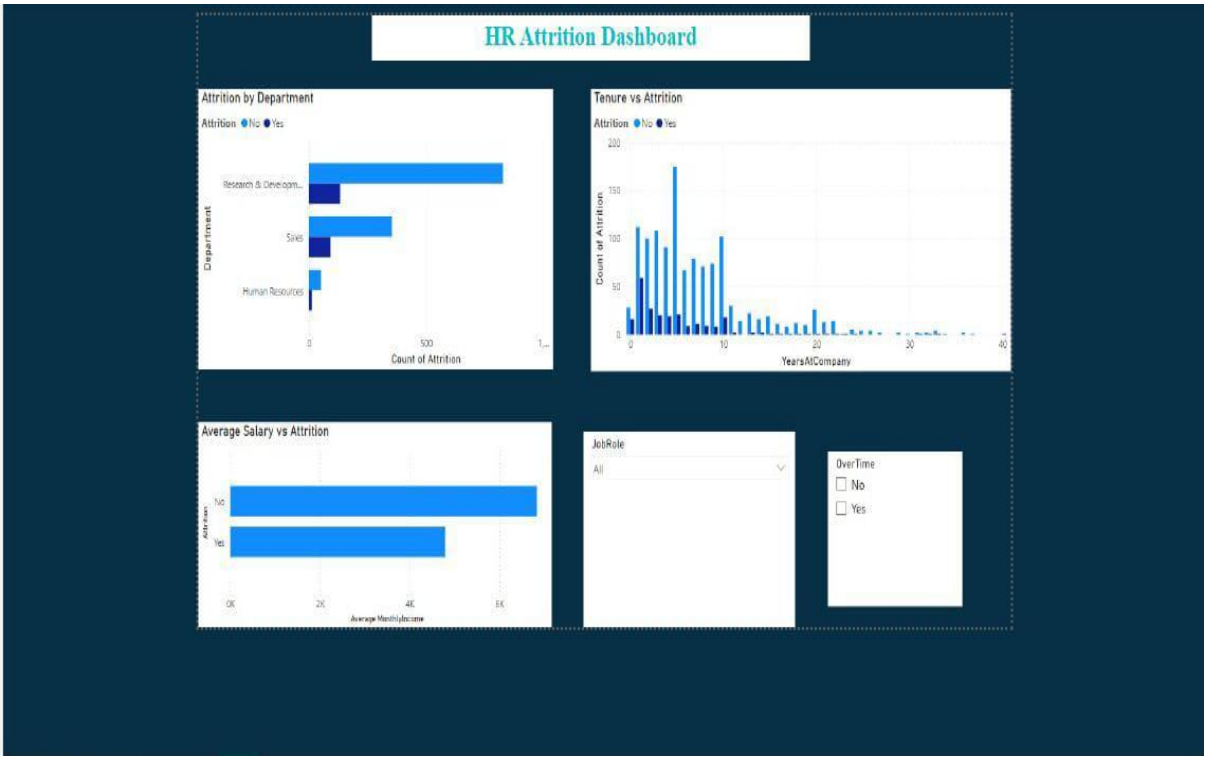
The model accurately predicts employees who stay (e.g., 230/247 No) but struggles with leavers (e.g., 20/47 Yes) due to imbalance.

7.



SHAP analysis confirms low MonthlyIncome and OverTime=Yes as top attrition drivers, guiding HR to focus on salary and workload.

8.



This Power BI dashboard visualizes attrition patterns, including a bar chart of attrition by department, a clustered bar chart of average `MonthlyIncome` by `Attrition`, and a histogram of `YearsAtCompany`. Slicers for `JobRole` and `OverTime` allow filtering, enabling HR to explore trends (e.g., high attrition in Sales with overtime).