



Employee Attrition and Performance Analysis Report



Probability of Attrition by Department

The table below shows the proportion of employees who left (Attrition = Yes) in each department:

Department Attrition Probability

Engineering 42.86%

HR 34.62%

Marketing 20.00%

Sales 53.85%



Insight:

- The **Sales department** has the **highest attrition rate** (53.85%), followed by **Engineering** (42.86%).
- **Marketing** has the lowest attrition, suggesting better retention in that team.
- These figures may indicate departmental challenges such as workload, culture, or leadership dynamics.



ANOVA Test: Performance Score Comparison Across Departments

To determine if the mean **performance scores** vary across departments, a **one-way ANOVA** was conducted.

- **F-statistic:** 25.7811
- **P-value:** 0.0000 (rounded from 2.56e-12)



Conclusion:



The **null hypothesis is rejected**.

There is a **statistically significant difference** in performance scores across departments. This suggests that some departments consistently perform better or worse than others.