

Employee Attrition Analysis and Prediction Report

Introduction

Employee attrition is a critical issue that can negatively impact an organization's efficiency and profitability. Understanding the factors leading to employee turnover can help in crafting strategies to enhance employee retention. This analysis delves into various aspects, including departmental differences, demographic factors, and job satisfaction levels, to provide a comprehensive view of attrition.

Detailed Analysis and Insights

1. Key Metrics Overview

Average Job Satisfaction for Attrition: 2.47

Observation: Employees who left the company generally reported lower job satisfaction, with an average score of 2.47, indicating dissatisfaction as a potential driver of attrition.

Turnover Rate: 0.16

Observation: The overall turnover rate of 16% suggests that nearly one in six employees leaves the organization, which could be a concern depending on industry benchmarks.

Average Job Satisfaction: 2.73

Observation: The overall average job satisfaction is slightly higher than the attrition-specific satisfaction score, but still relatively low, suggesting that improving job satisfaction could be critical.

Average Performance Rating: 3.15

Observation: Performance ratings appear relatively high, which might suggest that even high performers are leaving, possibly due to reasons unrelated to their performance, such as job satisfaction or work-life balance.

Average Relationship Satisfaction: 2.60

Observation: Relationship satisfaction is relatively low, which could impact overall job satisfaction and contribute to turnover.

Average Work-Life Balance: 2.66

Observation: The work-life balance score is on the lower side, indicating that employees may feel overworked or

find it challenging to balance their professional and personal lives.

2. Departmental Analysis

Count of Attrition by Department:

Observation: Attrition is evenly distributed among Human Resources, Research & Development, and Sales, each with 33.33%. This suggests that no single department is disproportionately affected by attrition, but each department faces similar challenges.

Count of Marital Status by Department

Observation:

Sales Department: Predominantly single employees (65.73%).

Research & Development: Majority are married (42.9%).

Human Resources: Balanced distribution between married and single employees.

Insight: The marital status distribution might reflect different work-life needs or job demands across departments. For instance, the higher number of single employees in Sales could correlate with the demanding or travel-intensive nature of the role.

3. Demographic Factors

Sum of Monthly Income and Total Working Years by Age

Observation:

- Younger employees tend to have lower total working years and monthly income.
- As age increases, both working years and income increase, but attrition seems to dip slightly for mid-career employees before rising again in older age.
- Insight: Younger employees might be leaving due to dissatisfaction with early career compensation or lack of growth opportunities, while older employees might be retiring or seeking less demanding roles.

Count of Employee Number by Age

Observation:

- The highest employee counts are in the younger age brackets (20-40).
- This suggests that attrition is concentrated among younger employees, which could indicate either dissatisfaction or more frequent job changes early in their careers.

4. Turnover Analysis

Overall Turnover by Age

Observation:

- The turnover rate is highest among employees in their 20s, with a noticeable decrease as age increases until around 40-50 years, after which it rises again.
- Insight: This could indicate that younger employees are more likely to leave due to exploration or early-career dissatisfaction, while mid-career employees might stabilize, and older employees might leave due to retirement or other factors.

Overall Turnover by Attrition

Observation:

- There is a positive linear relationship between overall turnover and attrition, indicating that as employees experience higher attrition factors (like low job satisfaction), the turnover rate increases.
- Insight: Efforts to improve job satisfaction, work-life balance, and relationship satisfaction could reduce turnover.

Overall Turnover by Job Role Category and Gender

Observation:

- High Turnover Roles: Sales Representatives, Research Scientists, and Laboratory Technicians show

high turnover rates.

- Gender Differences: In certain roles, gender seems to influence turnover rates, with noticeable differences in job satisfaction and attrition between males and females.

- Insight: Job role-specific interventions and understanding gender-related workplace issues could help in reducing turnover in these roles.

Overall Turnover by Job Satisfaction and Department

Observation:

- Sales and Research & Development departments show higher turnover among employees with lower job satisfaction scores.

- Insight: Improving job satisfaction in these departments could lead to a significant reduction in turnover. Customized programs to enhance employee engagement and satisfaction are recommended.

5.Conclusion

The analysis indicates that employee attrition is closely linked to job satisfaction, age, job role, and department. Younger employees, particularly in sales-related roles, demonstrate higher turnover rates. Departments with

lower job satisfaction, such as Sales and Research & Development, also exhibit higher attrition.