

HR Analytics Report

INTRODUCTION

Employee attrition, the departure of employees from an organization, is a critical aspect that impacts the stability and performance of a company. Understanding the factors contributing to employee attrition is essential for organizations to develop strategies for employee retention and overall workforce management. In this project, we aim to analyze and predict the factors responsible for employee attrition using a dataset obtained from Kaggle. This is a fictional data set created by IBM data scientists.

Overall Analysis

- In the organization, encompassing a total of 1470 employees, the **Research and Development Department** takes the lead with a substantial workforce of 961 individuals, following closely, the **Sales Department** contributes significantly to the organizational structure with 446 employees. Lastly, the **Human Resources Department**, while smaller in size with 63 employees, plays a pivotal role in managing talent, fostering a positive work environment, and ensuring effective organizational culture.

- The **Research and Development department** experiences the highest attrition rate, with 133 employees leaving the organization, reflecting challenges in retaining technical talent. The **Sales department** follows closely with 92 departures, indicating potential issues in sales team retention. **Human Resources**, with a count of 12, demonstrates a comparatively lower attrition rate, emphasizing stability in the department's workforce.

SUGGESTION-

To address the high attrition in Research and Development and Sales, consider implementing targeted retention strategies such as skill development programs, employee recognition initiatives, and regular feedback mechanisms.

- In analyzing attrition based on gender, a notable trend emerges with a higher attrition count among males. For instance, in the **Sales department**, out of 92 departures, 54 were male and 38 were female. Similarly, in **Research and Development**, 90 males and 41 females out of 133, while **Human Resources** shows an equal male and female attrition count, both at 6 out of 12 departures. Understanding gender-specific attrition patterns can guide targeted strategies for employee retention.

- When analyzing attrition by age across departments, a distinct pattern emerges. In the **Sales department**, the majority of departing employees fall within the 30-40 age group. Meanwhile, in **Research and Development**, the highest attrition occurs among individuals aged 18-30. Similarly, the **Human Resources department** experiences significant attrition in the 18-30 age bracket. Understanding age-specific attrition trends is crucial for tailoring retention strategies.
- In the **Research and Development** department, attrition is primarily in two key job roles. The departure of 62 employees is notable among Laboratory Technicians, while Research Scientists also contribute significantly with 47 employees leaving their positions. Understanding these role-specific attrition patterns is vital for targeted retention efforts.

- In the **Sales department**, the analysis of attrition by job role reveals a prominent trend. The departure of 57 employees is predominantly observed among Sales Executives, followed by Sales Representatives with 33 employees.
- The analysis of attrition based on employee tenure reveals a consistent pattern across departments. A noteworthy trend is observed, with a significant number of departures occurring as employees reach the 1-year mark – 17 in Sales, 38 in Research and Development, and 4 in Human Resources. Understanding this timeframe-specific attrition provides insights for targeted retention efforts.