

PROBLEM STATEMENT

Employee attrition remains a **critical concern** for organizations, leading to **increased hiring costs and potential disruptions** in productivity. This analysis seeks **to identify** how various HR attributes, including **job satisfaction, work-life balance, salary satisfaction**, and opportunities for career development, **influence** the likelihood of **employee turnover**. By examining these factors, the organization aims to **develop strategies** that can **enhance employee retention**, optimize talent management, and foster a positive work environment that reduces attrition rates.

DATA DESCRIPTION

Variables in the Dataset:

1. **Employee ID:** Unique identifier for each employee.
2. **Age:** The age of the employee (numerical).
3. **Gender:** The gender of the employee (e.g., Male, Female).
4. **Department:** The department where the employee works (e.g., Marketing, Sales, Engineering).
5. **Job Title:** The employee's specific job role within the department (e.g., Manager, Analyst, Engineer).
6. **Years at Company:** The total number of years the employee has worked at the company.
7. **Satisfaction Level:** A numerical score (likely between 0 and 1) representing the employee's job satisfaction.
8. **Average Monthly Hours:** The average number of hours the employee works in a month.
9. **Promotion Last 5Years:** A binary indicator (0 or 1) denoting whether the employee received a promotion in the last five years.
10. **Salary:** The annual salary of the employee (numerical).
11. **Attrition:** A binary indicator (0 or 1) where:
 - 0 = The employee is still with the company.

- 1 = The employee has left the company.

GRAPHS

Univariate Analysis: Analysing single variables

- Count of Employees (1K): A total count of employees in the dataset.
- Count of Attrition by Age: Displays the frequency distribution of employees who left the organization across different age groups.
- Promotion Last 5Years by Years at Company: Shows the count or proportion of employees promoted within the last 5 years across their tenure.

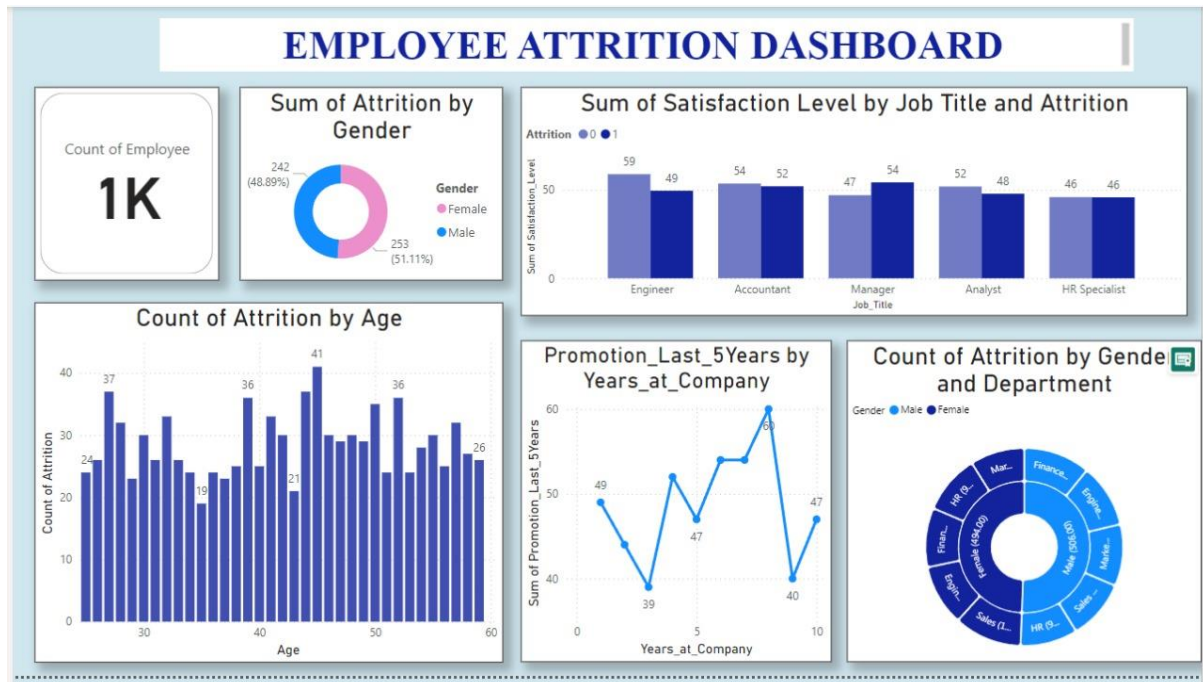
Bivariate Analysis: Exploring relationships between two variables

- Sum of Attrition by Gender: Compares attrition rates between male and female employees.
- Sum of Satisfaction Level by Job Title and Attrition: Shows how satisfaction levels vary across job titles and attrition statuses.
- Count of Attrition by Gender and Department: Examines the relationship between gender and department, segmented by attrition.

Multivariate Analysis: Involving three or more variables to uncover complex patterns

- Count of Attrition by Gender and Department: This donut chart indirectly includes gender, department, and attrition, presenting a breakdown by both demographics and work area.
- Sum of Satisfaction Level by Job Title and Attrition: Incorporates job title, satisfaction level, and attrition status to assess variations in satisfaction across job roles and whether employees stayed or left.

POWERBI DASHBOARD



FINDINGS FROM THE DASHBOARD

1. Attrition by Gender

The dataset comprises 1,000 employees, with attrition evenly distributed between genders:

- Male Attrition: 51.11% (253 employees).
- Female Attrition: 48.89% (242 employees).

Attrition is not significantly influenced by gender, indicating balanced treatment or similar challenges across genders.

2. Attrition by Age

Employees in their early 30s exhibit higher turnover:

- Peak Attrition: 41 employees aged 31.
- Significant Attrition: Ages 30, 34, and 36.

- Declining Attrition: Post 45 years of age, attrition trends downward.

Younger employees (early 30s) might be leaving due to unmet career expectations, better job offers, or dissatisfaction with work conditions.

3. Satisfaction Levels by Job Title

- Highest Satisfaction: Engineers (**59 points**).
- HR Specialists and Analysts (**54 points each**).
- Lowest Satisfaction: **Managers (47 points)**.
- Managers (**47 points**).

Managers might face challenges such as higher job pressure, lack of support, or limited growth opportunities, leading to lower satisfaction levels.

4. Promotions in the Last 5 Years

- High Promotions: Employees with **10+ years** of tenure received the most promotions.
- Low Promotions: Employees with **3–5 years** at the company see limited upward mobility.

The lack of promotion opportunities for mid-tenure employees could lead to frustration, disengagement, and ultimately, attrition.

5. Attrition by Gender and Department

- High Turnover Departments: Sales (both genders show significant attrition), Engineering.
- Low Turnover Departments: Finance and HR.

Implication: Sales roles may face high pressure or offer better external opportunities, making retention challenging.

BUSINESS IMPACT

The visualizations in the **Employee Attrition Dashboard** provide valuable insights into workforce trends and their potential business impact.

1. Gender and Attrition (Pie Chart)

Insight: Attrition is nearly balanced between males (51.11%) and females (48.89%).

Business Impact:

- Indicates potential equality in attrition causes across genders.

- Suggests the need for gender-neutral retention strategies.
- If attrition reasons differ by gender (e.g., work-life balance for women), targeted interventions might reduce attrition costs.

2. Satisfaction Levels by Job Title and Attrition (Bar Chart)

Insight: Engineers have the highest satisfaction scores (59), while HR Specialists have the lowest (46). Attrition is higher where satisfaction is lower.

Business Impact:

- Low satisfaction in certain roles (e.g., HR Specialists) signals the need to address role-specific issues (e.g., workload, recognition).
- High attrition in dissatisfied roles leads to hiring and training costs. Improving job satisfaction could reduce these expenses.

3. Count of Attrition by Age (Bar Chart)

Insight: Attrition peaks around the ages of 30–41.

Business Impact:

- High attrition in mid-career employees could indicate dissatisfaction with career progression, benefits, or work-life balance.
- Losing experienced employees disrupts operations and increases recruitment costs. Tailored development programs for this age group can boost retention.

4. Promotions in the Last 5 Years vs. Years at Company (Line Chart)

Insight: Promotions are unevenly distributed across tenure. Employees with 5–6 years receive fewer promotions compared to those with longer tenure.

Business Impact:

- Lack of promotions during early or mid-tenure may demotivate employees, contributing to attrition.
- Career stagnation impacts productivity and engagement. Structured promotion pathways could improve morale and reduce turnover.

5. Attrition by Gender and Department (Donut Chart)

Insight: Attrition is distributed differently across departments and genders.

Business Impact:

- Departments with higher attrition (e.g., Sales or HR) might face operational challenges.
- Attrition by gender in certain departments could highlight equity or inclusivity issues. Addressing these could improve organizational culture and employee satisfaction.

6. Count of Employees (KPI)

Insight: The dataset includes 1,000 employees, with a significant portion experiencing attrition.

Business Impact:

- High attrition disrupts workforce planning and may indicate systemic issues.
- Proactive measures (e.g., improving benefits, flexible work arrangements) could reduce attrition, saving costs and boosting productivity.

Overall Business Impacts

-Direct Costs: Attrition leads to recruitment, training, and onboarding expenses. Addressing dissatisfaction (e.g., in job roles, career growth) can mitigate these.

-Employee Morale: High attrition affects team morale and collaboration. Fostering satisfaction and recognition improves engagement.

-Productivity: Retaining high-performing and mid-career employees ensures consistent output and operational stability.

-Strategic Retention: Identifying key groups at risk (e.g., specific roles, ages) enables targeted interventions, reducing attrition rates effectively.

By addressing these insights, the organization can enhance employee retention, reduce costs, and maintain a motivated workforce.