

Employee Performance and Attrition Analysis Report

Submitted by,

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Introduction

The Employee Performance & Attrition Analysis project aims to leverage Power BI to analyze workforce trends, identify key drivers of employee attrition, and assess performance metrics. The insights derived from this analysis help organizations optimize employee retention strategies and improve productivity.

Objectives

- Identify factors influencing employee attrition, including salary, work-life balance, and tenure.
- Helping Management to bring down the attrition rate by finding the root causes.
- Create interactive reports in Power BI for insights.
- Improve HR decision-making using data-driven insights.

Problem Statement: Organizations face significant challenges in managing employee performance and retention. High employee attrition not only leads to increased hiring costs but also results in the loss of institutional knowledge, reduced productivity, and potential disruptions in business operations. Many organizations struggle to identify the root causes of attrition and performance issues due to the lack of comprehensive data analysis.

Key concerns include:

- Inability to accurately assess employee performance trends over time.
- Difficulty in identifying critical factors that contribute to voluntary and involuntary attrition.
- Inefficient HR decision-making due to the absence of deeper insights.
- Challenges in correlating compensation, job satisfaction, and work-life balance with employee retention.

Data Sources:

The project utilizes three key datasets:

| <div>• Dataset Name</div> | Description |
|---------------------------|---|
| Employee Data | Contains demographic and job-related details about employees. |
| Attrition Data | Tracks employee attrition and exit interview scores. |
| Employee Performance Data | Includes performance ratings, promotions, and job satisfaction. |

Employee Data

| Column Name | Data Type | Description |
|--------------------|-----------|--|
| Employee_ID | int | Unique identifier for each employee. |
| Age | int | Age of the employee. |
| first_name | str | First name of the employee. |
| last_name | str | Last name of the employee. |
| gender | str | Stated gender of the employee. |
| Department | str | Department where the employee works. |
| Job_Role | str | Specific role/title of the employee. |
| Education_Level | str | Highest education qualification. |
| Marital_Status | str | Marital status of the employee. |
| Job_Tenure | int | Number of years the employee has worked in the organization. |
| Distance_From_Home | int | Distance (in km) from employee's residence to the workplace. |

Attrition Data

| Column Name | Data Type | Description |
|-------------|-----------|----------------------|
| employee_ID | int | Employee identifier. |

| | | |
|-----------------------------|------|---|
| attrition | bool | Whether the employee has left the company (True = Yes, False = No). |
| Exit_Interview_Score | int | Score given during the exit interview. |

Employee Performance Data

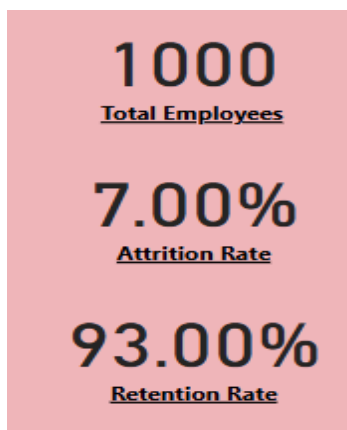
| Column Name | Data Type | Description |
|----------------------------|-----------|---|
| Employee_ID | int | Employee identifier. |
| Performance_Rating | int | Rating of employee performance. |
| Last_Promotion_Year | int | Year when the employee was last promoted. |
| Training_Hours | int | Number of hours spent in training programs. |
| Work_Life_Balance | int | Work-life balance rating. |
| Job_Satisfaction | int | Employee's satisfaction with their job. |

Visualizations Used:

- **Cards, Bar, Column, and Line Charts** to show performance trends and attrition rates.
- **Scatter Charts** to analyze relationships between job satisfaction and attrition.
- **Slicers** for filtering data dynamically in dashboards.

Insights from Visualizations:

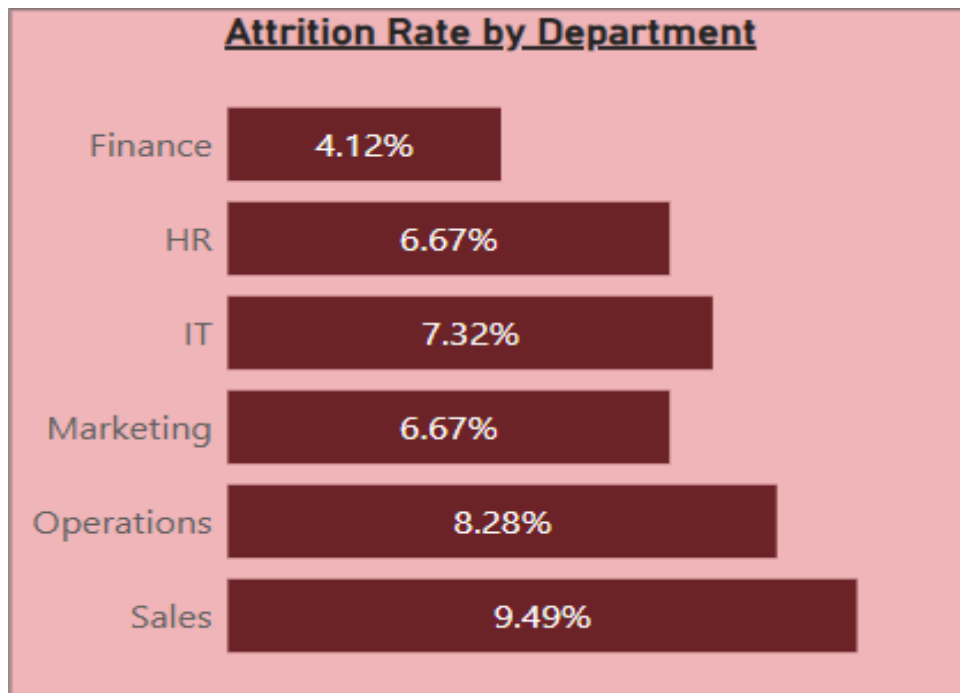
1. Overall Employee Statistics:



- Total Employees: **1000**
- Attrition Rate: **7.00%**
- Retention Rate: **93.00%**
- Average Performance Rating: **2.92**

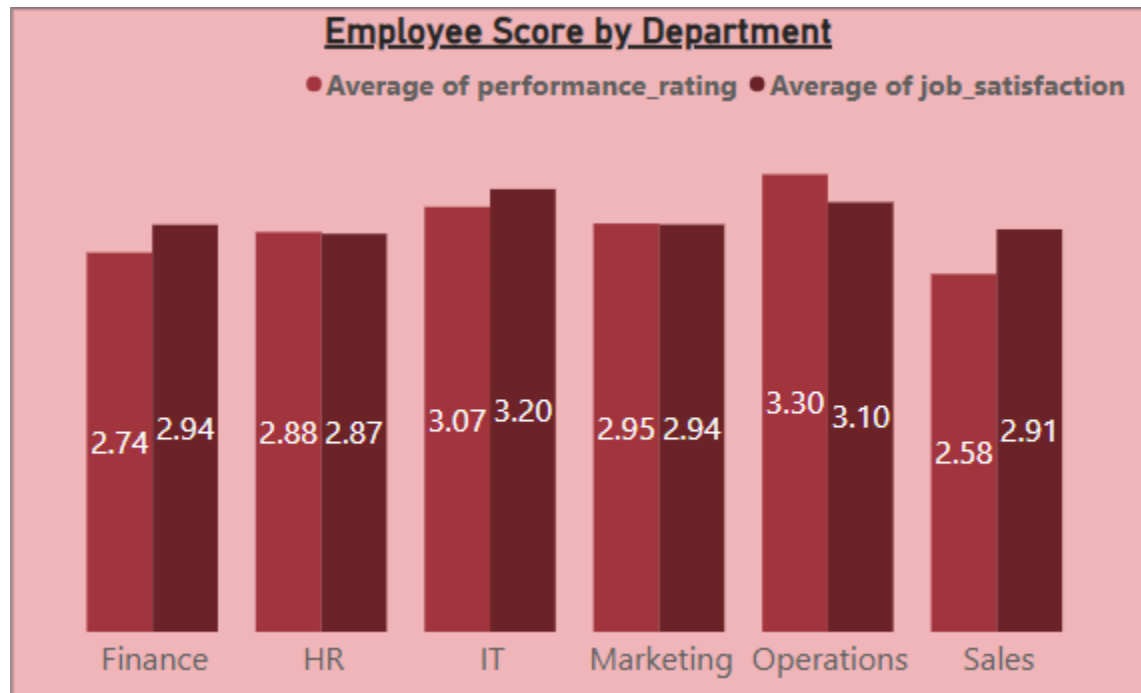
- Average Exit Interview Score: **3.10**
- Average Job Tenure: **10.30 years**

2. Attrition Rate by Department:



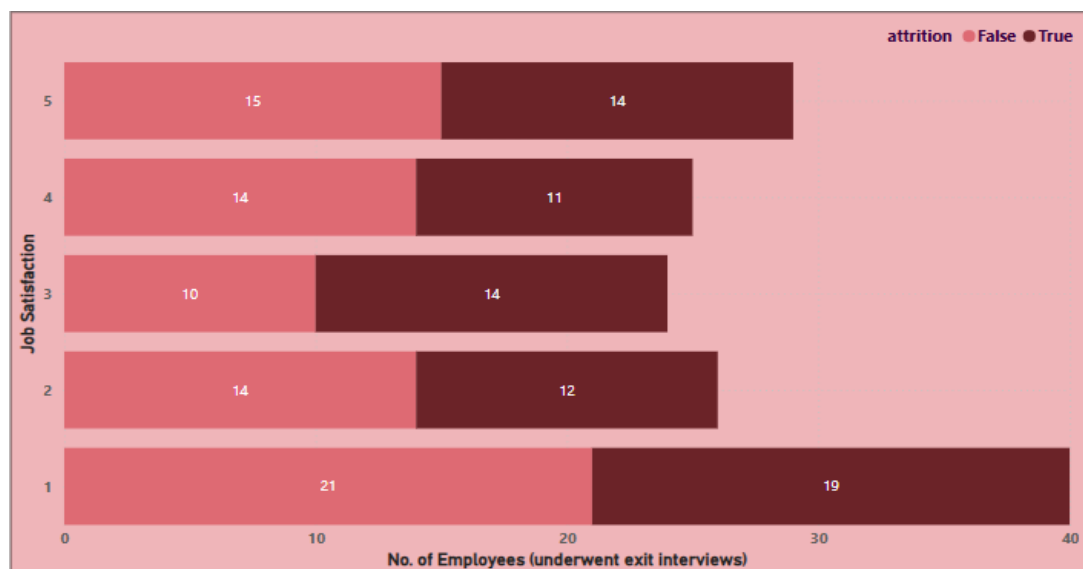
- Highest: Sales (9.49%), Operations (8.28%)
- Lowest: **Finance (4.12%)**

3. Employee Score by Department:



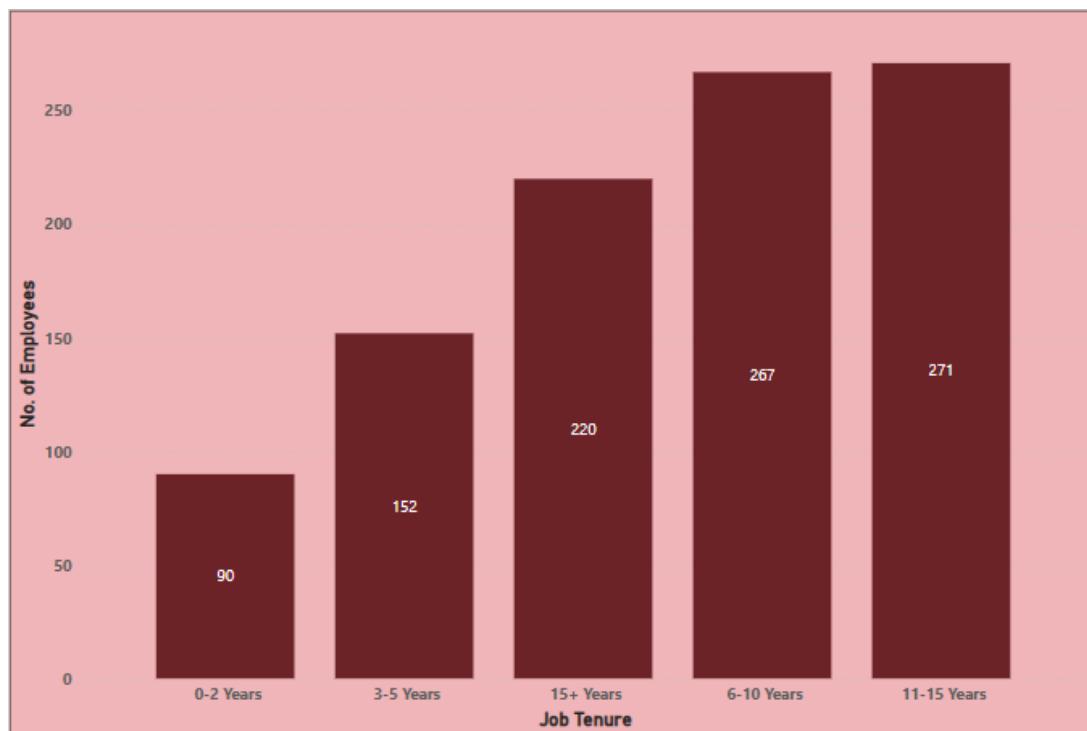
- Highest performance rating: **Operations (3.30)**
- Lowest job performance rating: **Sales (2.58)**
- Highest job satisfaction: **IT (3.20)**
- Lowest job satisfaction: **HR (2.87)**

4. Exit Interviews vs. Job Satisfaction:



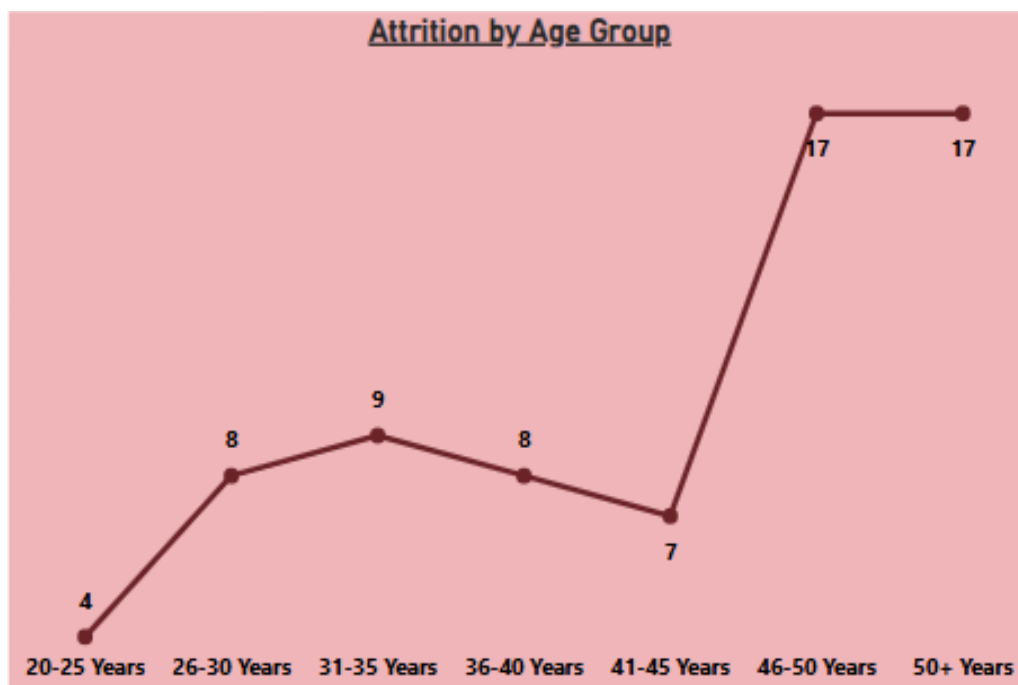
- Lower job satisfaction (scores 1-2) correlates with higher attrition.
- Higher satisfaction scores (4-5) show lower attrition.

5. Job Tenure Analysis:



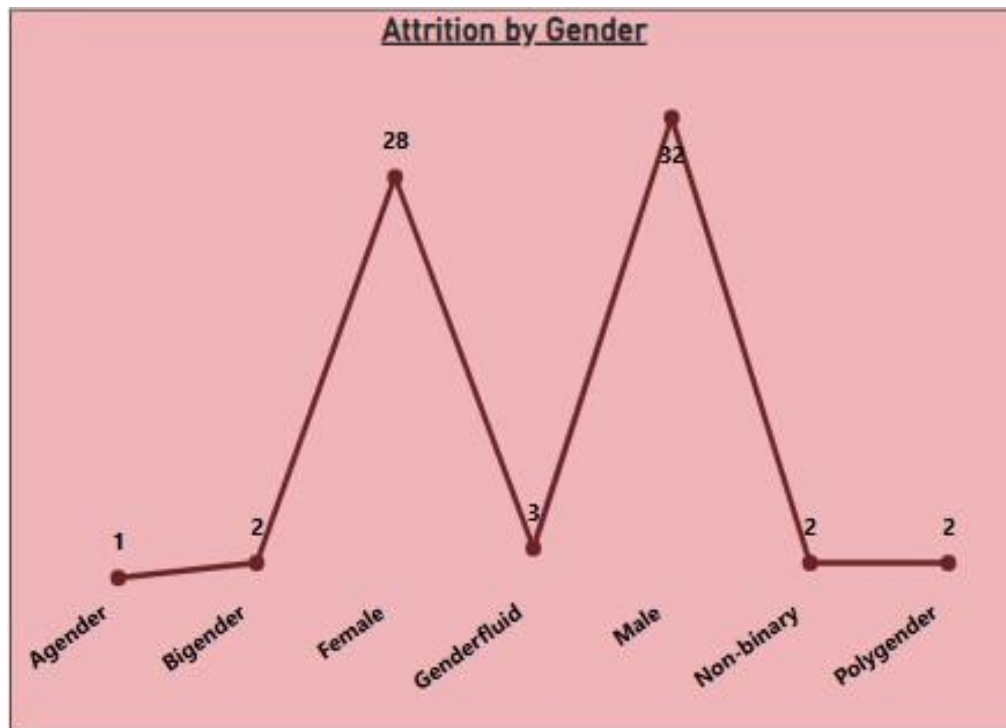
- Majority of employees have **6-15 years** of experience.
- **New employees (0-2 years)** are significantly fewer.

6. Attrition by Age Group:



- Higher attrition in the **46+ age group**.
- Lower attrition among younger employees (20-25 years).

7. Attrition by Gender:



- Highest: **Male (32 attritions), Female (28 attritions)**
- Other gender identities show lower attrition.

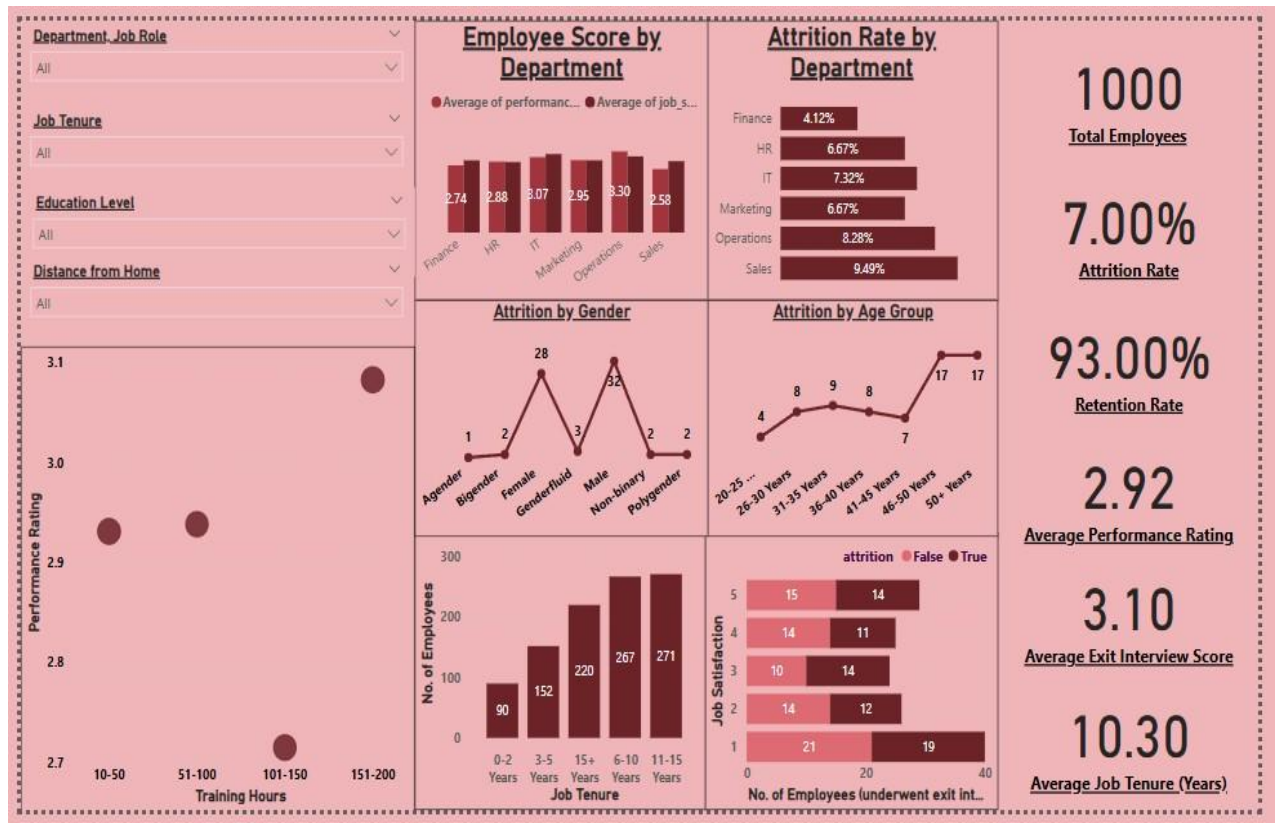
8. Training Hours vs. Performance Rating:



- Employees with **101-150 training hours** have the lowest performance rating.
- Employees with **151-200 training hours** have the highest performance rating.

Final Dashboard

- Slicers like Department, Job Role, Job Tenure, Education Level, Distance from Home are attached for filtering data dynamically.



The study provided valuable insights into employee attrition trends, performance ratings, and department-wise satisfaction levels, which can help organizations make data-driven decisions for workforce retention and improvement strategies.