

# **HR DATA ANALYSIS REPORT**

## **USING POWER BI**

### **Introduction**

Power BI is a business analytics tool by Microsoft that enables users to visualize their data and share insights across their organization or embed them in an app or website. It provides interactive visualizations and business intelligence capabilities with an interface simple enough for end-users to create their own reports and dashboards.

Key features of Power BI include:

- **Interactive Visualizations:** Create dynamic charts and graphs that provide a deep understanding of data.
- **Business Intelligence:** Integrate and analyze data from multiple sources to make informed business decisions.
- **Customizable Dashboards:** Tailor dashboards to meet the specific needs of the organization.
- **Real-Time Analytics:** Monitor data in real-time to keep up with the latest trends and changes.
- **Sharing and Collaboration:** Share reports and dashboards with team members and stakeholders to facilitate collaboration.

Power BI is extensively used for data analysis and visualization in various domains, including HR, finance, marketing, sales, and operations. In HR, Power BI can help track employee metrics, analyze workforce data, and provide insights into key HR functions.

### **Objectives**

The objective of this project is to create a Power BI dashboard using the last 4 years of employee hiring and exit details to assist in an upcoming meeting. The specific inputs required are:

1. Country and City Wise Information
2. Gender Diversity and Gender Diversity Comparison
3. Cultural Diversity Map Chart
4. Employee Count by Business Unit (BU) and Employee Count by Department
5. Waterfall Chart of Active and Inactive Employees

6. Attrition by Age and Attrition by Department
7. Current Status of Employees Using Age Group, Gender, and Active/Inactive Status
8. Year-Over-Year (YOY) Analysis from 2017 to 2021 of Hiring/Attrition Department-wise

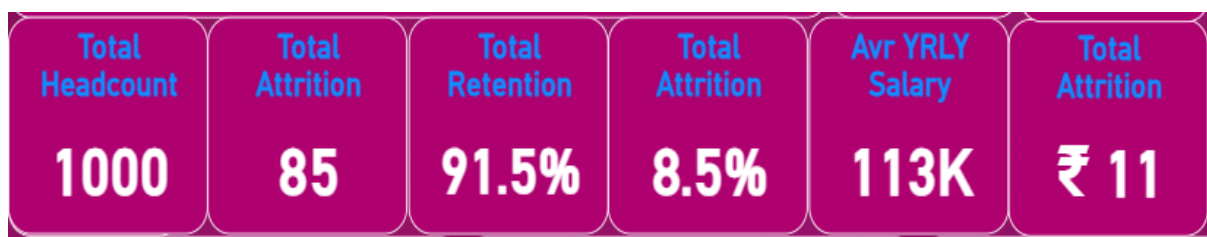
## Insights Derived from the Dashboard

### Page 1: HR Analytics Dashboard

The HR Analytics Dashboard provides a comprehensive overview of the organization's workforce. Key metrics and visualizations include:

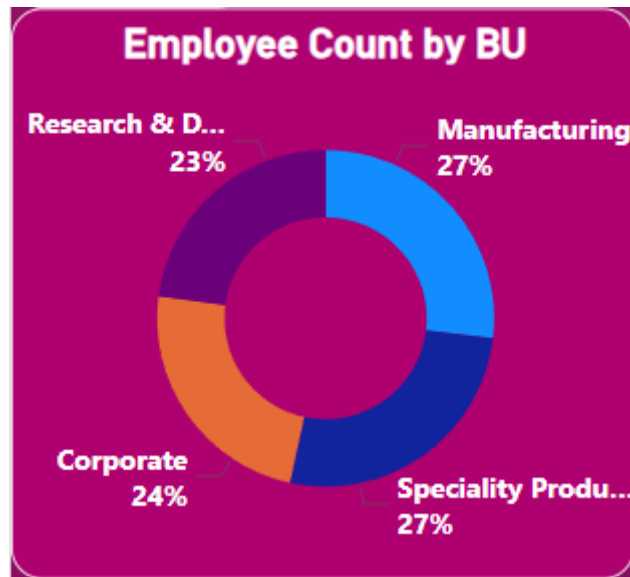
#### 1. ***Total Headcount, Attrition, Retention, and Average Yearly Salary***

- **Total Headcount:** 1000 employees
- **Total Attrition:** 85 employees
- **Total Retention:** 91.5%
- **Average Yearly Salary:** 113K
- **Total Attrition Cost:** ₹11



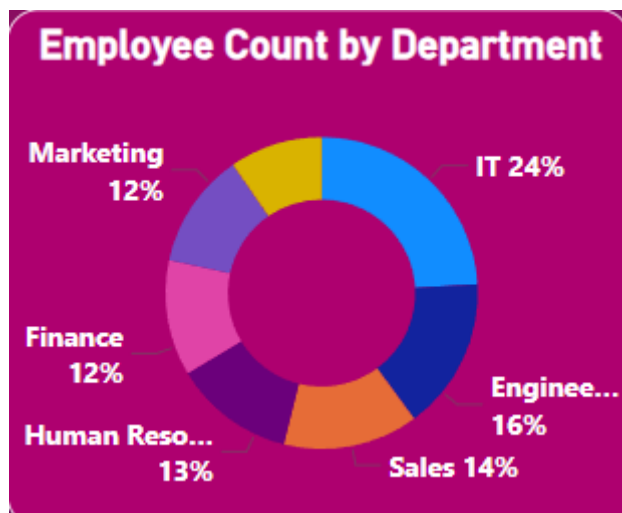
#### 2. ***Employee Count by Business Unit (BU)***

- **Manufacturing:** 27%
- **Specialty Products:** 27%
- **Corporate:** 24%
- **Research & Development:** 23%



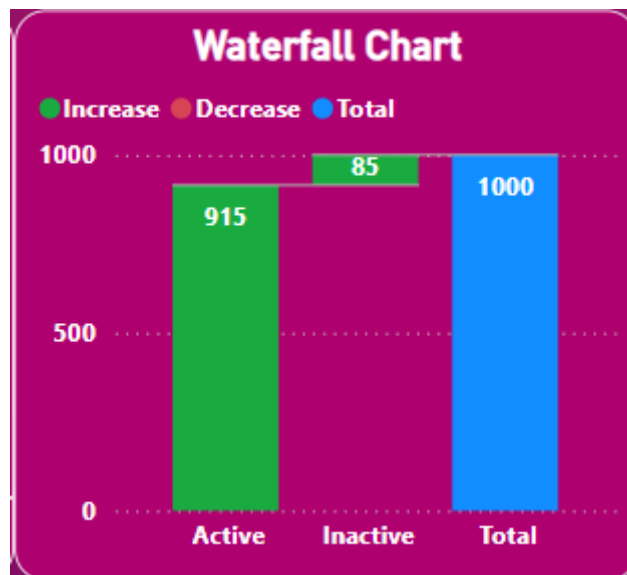
### 3. *Employee Count by Department*

- **IT:** 24%
- **Sales:** 14%
- **Engineering:** 16%
- **Human Resources:** 13%
- **Finance:** 12%
- **Marketing:** 12%



#### 4. Waterfall Chart

- **Total Employees:** 1000
- **Active Employees:** 915
- **Inactive Employees:** 85



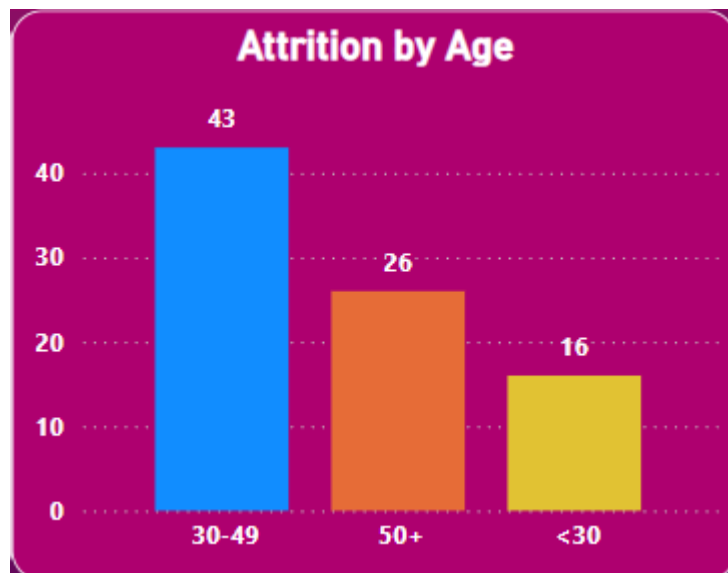
#### 5. Sum of Employee Count by City and Country

- This map visualization shows the geographical distribution of employees across different cities and countries.



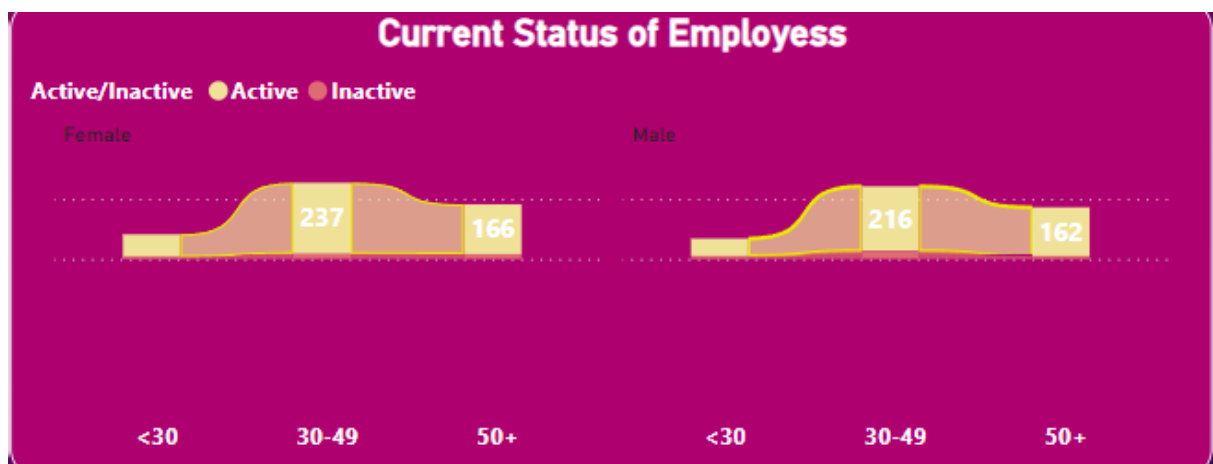
## 6. Attrition by Age

- **30-49 years:** 43 employees
- **50+ years:** 26 employees
- **<30 years:** 16 employees



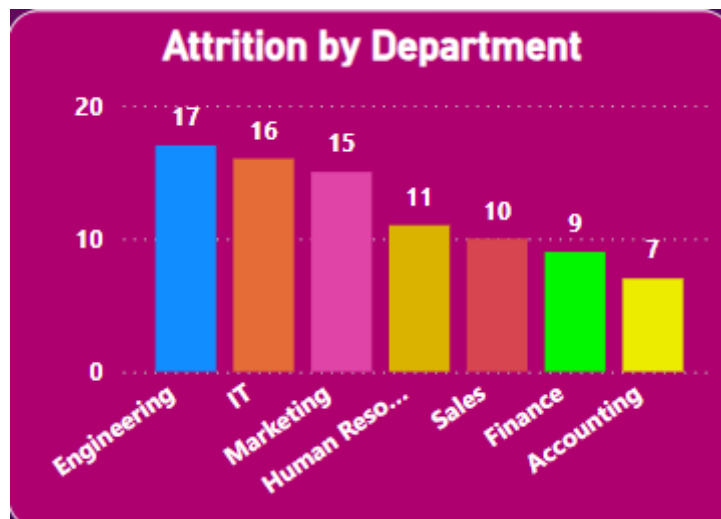
## 7. Current Status of Employees

- This area chart provides an overview of the current status of employees, segmented by gender and age group.
  - **Females:**
    - **<30:** 237 Active, 166 Inactive
    - **30-49:** 216 Active, 162 Inactive
    - **50+:** 162 Active, 162 Inactive



## 8. Attrition by Department

- **Engineering:** 17 employees
- **IT:** 16 employees
- **Marketing:** 15 employees
- **Human Resources:** 11 employees
- **Sales:** 10 employees
- **Finance:** 9 employees
- **Accounting:** 7 employees



# **PROBLEM STATEMENTS AND SOLUTIONS**

## **1. What is the total headcount of the organization and the active and inactive employees ?**

- **Solution:** The total headcount of the organization is 1000 employees.
- The active count of the employee is 915 employees.
- And the inactive employees is 85 employees.

## **2. What is the total attrition rate and how many employees left the organization?**

- **Solution:** The total attrition rate is 8.5%, with 85 employees leaving the organization.

## **3. Which business unit has the highest number of employees?**

- **Solution:** The Manufacturing and Specialty Products business units each have 27% of the total employees.

## **4. How is the employee distribution across various departments?**

- **Solution:** The IT department has the highest employee count at 24%, followed by Engineering (16%), Sales (14%), Human Resources (13%), Finance (12%), and Marketing (12%) etc.

## **5. What is the average yearly salary of the employees?**

- **Solution:** The average yearly salary of the employees is 113K.

## **6. Which age group has the highest attrition rate?**

- **Solution:** The 30-49 years age group has the highest attrition rate, with 43 employees leaving the organization.

## **7. Which department has the highest attrition rate?**

- **Solution:** The Engineering department has the highest attrition rate, with 17 employees leaving the organization.

## **Page 2: Year-Over-Year (YOY) Analysis**

This dashboard page provides an analysis of the employee count by business unit over different months and years.

### **Sum of Business Unit by Month and Year**

- This line chart shows the employee count trends across different months from 2017 to 2021.
- Each color represents a different year, allowing for a comparison of trends and patterns over time.
- The analysis helps identify seasonal trends, growth patterns, and potential areas of concern or opportunity within different business units.

## **CONCLUSION**

The HR Data Analysis project using Power BI offers valuable insights into the organization's workforce dynamics. By analyzing key metrics such as headcount, attrition, retention, and employee distribution, the project helps in identifying trends and patterns that inform strategic HR decisions. The detailed visualizations enable a clear understanding of the workforce, aiding in better planning and management of human resources. With the addition of the Year-Over-Year Analysis, the organization can track changes and trends over time, further enhancing its ability to make data-driven decisions.