Employee Attrition Analysis Dashboard in Power BI

1. Data Loading and Preparation

a. Import Dataset

- Open **Power BI Desktop**.
- Go to **Home > Get Data > Excel** (or appropriate data source) and import your dataset.

b. Data Cleaning

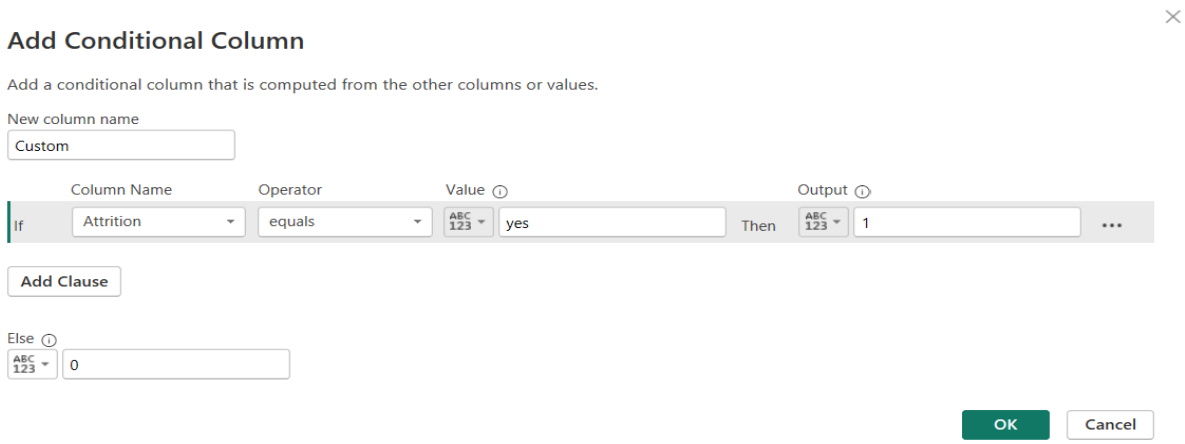
- Review the dataset for any missing or inconsistent data.

2. Data Transformation

- Open Power Query Editor by clicking on Transform data.

a. Create Additional column for Attrition

- Click on the Add Column > Conditional column



OR

Formula:

= Table.AddColumn(#"Reordered Columns", "Attrition_", each if [Attrition] = "Yes" then 1 else 0)

- Click on the New column Header >
  Change Name & select datatype Whole numbers

b. Create Additional column for Age Group

Fromula :

```
= Table.AddColumn(#"Changed Type1", "Age_Group", each
  if [Age] < 25 then "18-24"
  else if [Age] >= 25 and [Age] < 35 then "25-34"
  else if [Age] >= 35 and [Age] < 45 then "35-44"
  else if [Age] >= 45 and [Age] < 55 then "45-54"
  else "55+")
```

3. Data Modeling

a. Create Measures (for KPIs)

- **Attrition Rate:**

DAXCopy code: Attrition Percentage =

DIVIDE(sum('WA_Fn-UseC_-HR-Employee-Attrition'[Attrition_]),

COUNTROWS('WA_Fn-UseC_-HR-Employee-Attrition'),0)

4. Dashboard Design

a. Attrition Rate KPI

- Drag a **KPI visual** onto the report canvas.

b. Total Number of Attrition KPI

- Drag a **Card visual** onto the report canvas.

c. Total Number of Employees KPI

d. Average Salary of Employees KPI

e. Average Years in Company KPI

f. Department Type Filter

- Add a **Slicer** visual.

- Drag the Department field to the Values area of the slicer.
- Customize the slicer to display Department types like HR, R&D, sales, etc.

g. Gender Type Filter

- Add a **Slicer** visual.
- Drag the **Gender** field to the Values area of the slicer.
- Make a slicer to display Gender types like male & female.

h. Education Field

- Create a **Donut Chart**.
- Use **Attrition** and **Education Field** for analysis.

i. Job-Role

- Use a **Column Chart.**
- Use **Attrition** and **Job-Role** for analysis.

j. Age Group

- Use a **Column Chart.**
- Use **Attrition** and **Age-Group** for analysis.

k. Percentage SalaryHike

Use a Bar Chart.

- Use **Attrition** and **Percentage SalaryHike** for analysis.

Dashboard 2: Work-Life Balance & Engagement Analysis

a. Job-Role

- Create a **Donut Chart**.
- See Difference in Work-Life Balance within JobRoles.

b. Over-Time Work

- Use a **Clustered Column Chart**.

- Compare **Work-Life Balance** & **Job Satisfaction.**

c. Relationship Satisfaction

- Use a **Clustered Column Chart**.
- Compare department-wise Relationship Satisfaction with Monthly Income.

d. job-Involvement

- Use a **Stacked Bar Chart**.
- Compare department-wise Job -Involvement by male-Female.

e. Work-Life Balance

- Use a **Clustered Column Chart**.
- Compare department-wise Work-Life Balance with Performance Rating.

Dashboard 3 : Carrer Development Analysis

a. Job-Role

- Create a **Donut Chart**.
- See average Years of Employees in particular JobRoles.

b. Job-Satisfaction

- Craete an **Area Chart.**
- Compare Average years of Employees in Current Role with Job Satisfaction by male-female.

c. Last-Promotion

- Use a **Clustered Column Chart.**
- Compare department-wise Average Years Since Last Promotion with Performance Rating.

d. Education Level

- Use a **Clustered Column Chart.**
- Compare Education Level & Job Level.

5. Final Touches

a. Formatting

• Apply consistent colors, fonts, and styles across visuals.

• Add titles, axis labels, and legends to enhance readability.

b. Tooltips and Interactivity

• Add tooltips to provide additional information on hover.

• Ensure slicers and filters interact with all related visuals for a dynamic dashboard.

c. Testing

• Test the dashboard with different filter selections to ensure accurate data representation.

Conclusion for Employee Attrition Analysis

The Employee Attrition Analysis dashboard provides valuable insights into the factors affecting Attrition rates within the dataset. Through this analysis, several key findings and implications emerge:

Key Metrics:

Total number of Employees	1470
Total number of Employees that left the company	237
Total Number of Employees that remained	1233
Overall Attrition Percentage Rate	16.12 %
Average Monthly Income of all the employees	6.50k
Average Relationship Satisfaction	2.71

More Insights:

- Total attrition = 237 [150 Males and 87 Females]
- Based on Department: Attrition rates vary across departments, with the highest in R & D and the lowest in HR.
- Based on job Role, Laboratory technicians had the highest attrition of 62 employees leaving.
- The 25-34 age group had the highest attrition, with 112 employees leaving.
- The education field of life science had the highest attrition, with 89 employees leaving.

- Employees who stayed at the company for one year had the highest attrition, with 59 employees leaving.

Work-Life Balance:

- Poor Work-life Balance Promotes low-**Performance Ratings**, So we need to consider this factor.
- Research & Development shows the highest work-life balance scores, while Human Resources has the lowest.
- **Job Involvement**: In the R & D and Sales department Males were highly Involved with their jobs.
- Organize team-building activities and workshops to **better relationships**, especially in the Sales department.
- **Overtime Impact**: Employees working overtime show lower job satisfaction compared to those who do not. suggesting a need to manage workloads better.
- Support work-life balance through flexible scheduling options. Also, Implement remote work options.
- Continuously monitor work-life balance metrics and implement improvements where necessary.

Career development:

- Focus on improving **job satisfaction**, particularly in roles with **shorter tenure**, to increase employee retention.
- Freshers or Less-Experienced Employees dissatisfied with their current job role. Focusing on freshers and giving them opportunities to work with experienced employees increases the chances of them staying with the company.
- Departments with more frequent **promotions** have **higher performance ratings,** underscoring the importance of clear career progression paths.
- **Distribution of Education Level**: There is a positive correlation between education level and job level across departments.
- Develop targeted retention programs for high-risk groups, such as those in the 25-34 age group, Laboratory Technicians, and single employees. Personalized retention strategies can be more effective.

Those insights will help improve employee retention and satisfaction.

Thank you.