Hr Analytics Using Power BI

Problem Statement

Background :

      XYZ Company recognizes the critical importance of effectively managing its human resources to drive organisational success. With a workforce of highly skilled professionals, the company understands that minimising attrition is essential for maintaining a competitive edge in the industry.

Current Situation:

      Despite implementing various retention strategies, XYZ Company's HR department lacks comprehensive insights into the underlying factors contributing to employee attrition. Without a clear understanding of these factors, it is challenging to develop targeted interventions to mitigate attrition rates effectively.

Objective:

      The objective of this project is to leverage data analytics techniques to gain actionable insights into employee attrition at XYZ Company. By identifying key drivers of attrition and understanding their impact on different segments of the workforce, the HR department aims to develop data-driven strategies to reduce attrition rates and improve employee retention.

1. **Employee ID**: A unique identifier for each employee.

2. **Age**: The age of the employee.

3. **AgeGroups** : Convert Employee Age Into Common Groups.

Age Groups				
18-25	26-35	36-45	46-55	55+

4. **Attrition**: A binary variable indicating whether the employee has left the company (Yes/No).

5. **BusinessTravel** : This column indicates the frequency or level of business travel required for each employee's role within the company.

BusinessTravel	
Non-Travel	No business-related travel required.
Travel Frequently	Regular business travel, often weekly or monthly.
Travel Rarely	Occasional business travel, infrequent trips, typically a few times a year.
Travel Frequently	Significant and frequent business travel, possibly multiple times per month or for extended periods

6. **DailyRate** : It represents the amount of money an employee earns per day for their work

7. **Department** : It represents the specific organisational division or unit within which an employee works.

Department		
Human Resources	Research & Development	Sales

8. **DistanceFromHome** : It represents the distance in terms of commute or travel required for an employee to reach their workplace from their place of residence.

9. **EducationField** : It refers to the field or area of study in which an employee has received their highest level of education.

EducationField					
Life Sciences	Medical	Marketing	Technical Degree	Human Resources	Other

10. **EmployeeNumber** : serves as a unique identifier assigned to each employee within the organisation, facilitating easy reference and tracking of individual employees across various HR systems and databases.

11. **EnvironmentSatisfaction** : It indicates the level of satisfaction an employee has with their work environment, encompassing factors such as physical workspace, company culture, and organisational atmosphere.

EnvironmentSatisfaction			
Low	Medium	High	Very High

12. **Gender**: The gender of the employee (Male/Female).

13. **HourlyRate**: It denotes the amount an employee is paid per hour for their work, typically used for roles paid on an hourly basis rather than a salary.

14. **JobInvolvement**: It reflects the degree to which an employee is psychologically engaged and committed to their job role within the organisation.

JobInvolvement	
Low	Employees demonstrate minimal engagement and commitment to their job roles, exhibiting a lack of interest and motivation.
Moderate	Employees show moderate engagement and commitment to their job roles, with room for improvement in certain areas.
High	Employees display high levels of engagement and commitment to their job roles, actively participating and contributing to tasks and projects.

Very High	Employees exhibit exceptional levels of engagement and commitment to their job roles, demonstrating strong dedication and enthusiasm towards their work.

15. **Job Level**: The hierarchical level of the employee's position within the organisation.

Job Level				
Entry-Level	Mid-Level	Senior-Level	Executive-Level	Specialist/Technical-Level

16. **Job Role**: The specific role or position held by the employee.

Job Role Types
Healthcare Representative
Human Resources
Laboratory Technician
Manufacturing Director
Research Director
Research Scientist
Sales Executive
Sales Representative

17. **JobSatisfaction** : It indicates the level of contentment or fulfilment an employee experiences in their job role within the organisation.

JobSatisfaction	
Highly Satisfied	Employees who experience a strong sense of fulfilment and contentment in their job roles, indicating high levels of engagement and motivation.
Satisfied	Employees who generally feel content and fulfilled in their job roles, with few concerns or dissatisfaction.

Neutral	Employees who neither strongly like nor dislike their job roles, exhibiting a moderate level of satisfaction.
Dissatisfied	Employees who experience dissatisfaction or discontentment in their job roles, indicating low levels of engagement and motivation.

18. **MaritalStatus** : It refers to an individual's current marital status, indicating whether they are **single, married, divorced, or widowed.**

19. **MonthlyIncome** : It represents the amount of money an employee earns in salary or wages per month before deductions and taxes.

20. **NumCompaniesWorked**: It indicates the number of different companies an employee has worked for throughout their career.

21. **OverTime**: It denotes whether an employee works overtime hours in their current job role, typically indicating whether they work beyond their regular working hours.

22. **PercentSalaryHike**: It represents the percentage increase in salary that an employee receives compared to their previous salary.

23. **PerformanceRating** : signifies the assessment level of an employee's job performance, often categorised into different rating levels.

PerformanceRating	
Below Expectations	Performance falls significantly below the expected standards, requiring improvement.
Needs Improvement	Performance meets some expectations but requires development in certain areas to meet overall standards
Meets Expectations	Performance consistently meets the expected standards for the role.
Exceeds Expectations	Performance consistently exceeds the expected standards and demonstrates exceptional competence and achievement.
Outstanding	Performance far surpasses expectations, showcasing exemplary skills, results, and contributions to the organisation.

24. **TotalWorkingYears**: It refers to the total number of years an employee has been actively employed, encompassing their entire work history, including employment at previous companies.

25. **Years at Company**: The number of years the employee has been with the company.

26. **Years in Current Role**: The number of years the employee has been in their current position.

HR Attrition Analytics Dashboard

Human Resources | **Research & Development** | Sales

Attrition By Gender
Male: 90 | Female: 43

Metric	Value
Total Employee	967
Attrition %	13.8
Retention %	86.2
Avg Year Work	7
Avg Salary	6K

Attrition By Job Involvement
- Moderate 30%
- Low 9%
- Very 4%
- High 57%

Attrition By Year At Company
92, 34, 2, 2, 1, 1, 1, 0
(0-5, 6-10, 16-20, 31-35, 11-15, 21-25, 35, 26-30)

Attrition By Salary
(Salary Groups: 6-10, 0-5, 11-15, 16-20, 21-25, 31-35, 35, 26-30)

Attrition By Marital Status
- Single: 66
- Married: 49
- Divorced: 18

Attrition By Job Role
- Laboratory Technic...: 62
- Research Scientist: 47
- Manufacturing Dir...: —
- Healthcare Represe...: 9

Attrition By Job Level
- Entry-Level
- Mid-Level
- Senior-Level
- Specialist/...
- Executive-...

Attrition By Percentage Salary Hike
21, 21, 6, 4, 2, 8, 4, 5, 1
(Percentage Salary Slab: 10, 12, 14, 16, 18, 20, 22, 24)

HR Attrition Analytics Dashboard

Human Resources | Research & Development | **Sales**

Attrition By Gender
Male: 55 | Female: 38

Metric	Value
Total Employee	450
Attrition %	20.7
Retention %	79.3
Avg Year Work	7
Avg Salary	7K

Attrition By Job Involvement
- Moderate 29%
- Low 16%
- Very 8%
- High 47%

Attrition By Year At Company
61, 20, 6, 3, 2, 1, 0, 0
(0-5, 6-10, 11-15, 21-25, 16-20, 31-35, 26-30, 35)

Attrition By Salary
(Salary Groups: 0-5, 6-10, 11-15, 16-20, 21-25, 26-30, 31-35, 35)

Attrition By Marital Status
- Single: 53
- Married: 29
- Divorced: 11

Attrition By Job Role
- Sales Executive: 58
- Sales Representative: 33
- Manager

Attrition By Job Level
- Mid-Level
- Entry-Level
- Senior-Level
- Executive-...
- Specialist/...

Attrition By Percentage Salary Hike
16, 11, 14, 6, 6, 9, 1, 2, 0
(Percentage Salary Slab: 10, 12, 14, 16, 18, 20, 22, 24)