HR Data Analytics

1. **Introduction**

**Project Name**: Employee Retention

**Dataset**: HR 1 and HR 2

**Dataset Type**: Excel Data

**Dataset Size**: 50k records each

1. **About Dataset**

**HR1 Column Names**

|  |
| --- |
| **Age**: Age varies from 18 to 60 years |
| **Attrition**: It refers to the process of reducing the workforce or the gradual reduction in the number of employees through various means, such as resignations, retirements, or terminations. It has “Yes” and “No” values |
| **Business** **Travel**: It refers whether employee need to travel for business. It has three unique values Non-Travel, Travel-Rarely, Travel-Frequently |
| **Daily** **Rate**: refers to the amount of money an employee earns on a daily basis. It varies from 100$ to 1500$. |
| **Department**: It refers to Department in which employee works. |
| **Distance** **from** **Home**: Distance of office from his home. |
| **Education**: Employees Qualifications |
| **Education** **Field**: Field of his Education |
| **Employee** **Count:** Employee Count |
| **Employee** **Number**: It is Primary Key in ‘HR 1’ file and is same as Employee ID in ‘HR 2’ file |
| **Environment** **Satisfaction**: It refers to employees rating about whether he is satisfied with company environment |
| **Gender**: Male and Female |
| **Hourly** **Rate**: Hourly Rate of Employee |
| **Job** **Involvement**: Involvement of employee at workplace. |
| **Job** **Level**: Position Level |
| **Job** **Role**: Job Role of Employee |
| **Job** **Satisfaction**: It refers to employees rating about job. |
| **Marital** **Status**: Married , Un-Married, Divorsee |

**HR 2 Column Names**

**Employee** **ID**: Unique identifier for each employee.

**Monthly** **Income**: Total income earned by the employee in a month.

**Monthly** **Rate**: Rate of pay per month.

**Num** **Companies** **Worked**: Number of companies the employee has worked for.

**Over** **18**: Indicates if the employee is over 18 years old.

**Over** **Time**: Indicates if the employee works overtime.

**Percent** **Salary** **Hike**: Percentage increase in salary.

**Performance** **Rating**: Rating of the employee's performance.

**Relationship** **Satisfaction**: Satisfaction level with work relationships.

**Standard** **Hours**: Standard number of working hours.

**Stock** **Option** **Level**: Level of stock options granted to the employee.

**Total** **Working** **Years**: Total number of years the employee has been working.

**Training** **Times** **Last** **Year**: Number of training sessions attended last year.

**Work Life Balance**: Employee's perception of work-life balance.

**Years At Company**: Number of years the employee has been with the company.

**Years In Current Role**: Number of years in the current role.

**Years Since Last Promotion**: Number of years since the last promotion.

**Years with Curr Manager**: Number of years with the current manager

1. **Objectives**

The aim of this project is to find following KPI’s

* **Average Attrition rate for all Departments**
* **Average Hourly rate of Male Research Scientist**
* **Attrition rate Vs Monthly income stats**
* **Average working years for each Department**
* **Job Role Vs Work life balance**
* **Attrition rate Vs Year since last promotion relation**

1. **SQL Queries for each KPI’s and their results**

**4.1. Average Attrition rate for all Departments**

It refers to the calculation of the average percentage of employees who have left an organization across all its departments over a specified period of time. Attrition rate, often expressed as a percentage, represents the proportion of employees who have departed from the organization due to various reasons, such as resignations, retirements, or other forms of workforce reduction.

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**4.2. Average Hourly rate of Male Research Scientist**

indicates the average amount of money earned per hour by male employees in the role of a Research Scientist. This metric is often used to understand the compensation structure for a specific job position, in this case, Research Scientist, with a focus on employees who identify as male.

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**4.3. Attrition rate Vs Monthly income stats**

It suggests an analysis or comparison between the attrition rate and statistics related to monthly income. It helps to solve questions like Do employees with higher monthly incomes have lower attrition rates? Is there a pattern or trend in attrition rates based on different income brackets?

Are there departments or roles where attrition is more pronounced, considering monthly income levels? Etc.

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* 1. **Average working years for each Department**

It refers to an analysis that calculates the average number of years of employment for employees within each specific department of an organization. This metric provides insights into the average tenure or duration of service for individuals working in different departments.

It tells us that the average length of time employees tend to stay in each department. Differences in tenure between departments, which may indicate varying levels of employee retention.

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**4.5. Job Role Vs Work life balance**

It suggests an exploration or analysis of the relationship between an individual's job role and their perceived work-life balance. Here's what it generally means:

**Job Role:** This refers to the specific position or responsibilities that an individual holds within an organization. Different job roles come with varying duties, expectations, and levels of responsibility.

**Work-life Balance:** This is a concept that relates to the equilibrium or harmony between an individual's professional responsibilities (work) and their personal life. Achieving a good work-life balance implies managing work demands while also having time for personal and family activities.

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**4.6. Attrition rate Vs Year since last promotion relation**

It suggests an analysis or examination of the relationship between two variables: attrition rate and the number of years since the last promotion. Here's what it generally means:

**Attrition Rate:** This is a metric that measures the rate at which employees leave an organization over a specific period. It is often expressed as a percentage and calculated by dividing the number of employees who left by the average number of employees during that period.

**Year since Last Promotion:** This refers to the duration, in years, since an employee received their last promotion within the organization. It indicates how much time has passed since an individual experienced career advancement.

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1. **Excel Dashboard**

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1. **Key Findings**

* **1. Average hourly rate of both male and female Research Scientists is approximately same.**
* **2. There is near about 50% attrition rate is all the departments.**
* **3. People who left the organization have been not promoted from average past 6 years.**
* **4. Research Scientists have very good work life balance while Sales Executives are overwhelmed.**
* **5. Average people who left the organization had more salary that people who are currently working in organization**