**EMPLOYEE ATTIRTION**

# INTRODUCTION

This data set contains employees details in a company and includes information of employees such as EmployeeID, Age, Attrition, BusinessTravel, DailyRate, Department, DistanceFromHome, Education, EducationField, EmployeeCount, EnvironmentSatisfaction, Gender, HourlyRate, JobInvolvement, JobLevel, JobRole, JobSatisfaction, MaritalStatus, MonthlyIncome, MonthlyRate.

The aim of analyzing this dataset is to gain insights into the workforce dynamics within the organization.

# AIM

The aim of the analysis of this dataset is to identify details of every employee. The dataset seems to be related to employee attributes and includes fields like age, department, education, job satisfaction, monthly income, and more. Analyzing this dataset can help you achieve several key objectives depending on your goals.

The main goal is to find, classify and easily access data of employees which can help the user. This dataset contain important data about '1676' employees.

# OBJECTIVE

1. Employee Attrition Analysis:

Identify the factors that contribute most to employee attrition.

2. Employee Satisfaction and Engagement:

Evaluate the overall job satisfaction and engagement levels among employees.

3. Salary Analysis:

Explore the salary distribution across different roles, departments, and education levels.

4. Predictive Modeling:

Predict future employee behavior such as likelihood of leaving the company or getting promoted.

5. Performance Analysis:

Analyze the factors that influence employee performance.

6.Data cleaning:

The database contains many missing values and duplicate rows, by the cleaning process we can ensure the database integrity.

7.SQL Queries:

This database includes SQL queries to execute relevant information by using SELECT, WHERE, DISTINCT, LIMIT, GROUP BY, ORDER BY, and aggregation functions.

# DATA OVERVIEW

**Columns**  **Datatype**

|  |  |
| --- | --- |
| EmployeeID | int |
| Age | int |
| age\_category | varchar(100) |
| Attrition | text |
| BusinessTravel | text |
| DailyRate | int |
| Department | text |
| DistanceFromHome | int |
| Education | int |
| EducationField | text |
| EmployeeCount | int |
| EnvironmentSatisfaction | int |
| Gender | text |
| HourlyRate | int |
| JobInvolvement | int |
| JobLevel | int |
| JobRole | text |
| JobSatisfaction | int |
| MaritalStatus | text |
| MonthlyIncome | int |
| MonthlyRate | int |

**QUESTIONS**

1. What is the total number of employees?

SELECT COUNT(\*) FROM emp\_table;

2. How many new employees are there?

SELECT COUNT(\*) FROM emp\_table WHERE age = 18;

3. What is the maximum daily payment to an employee?

SELECT MAX(dailyrate) FROM emp\_table;

4. What is the minimum daily payment to an employee?

SELECT MIN(dailyrate) FROM emp\_table;

5. What are the details of the employee with the minimum daily payment?

SELECT \* FROM emp\_table WHERE dailyrate = 102;

6. What are the details of the employee with the maximum daily payment?

SELECT \* FROM emp\_table WHERE dailyrate = 1499;

7. How many employees have the maximum distance from home?

SELECT MAX(distancefromhome) FROM emp\_table;

8. How is the number of employees categorized by business travel?

SELECT businesstravel, COUNT(\*) AS counts FROM emp\_table GROUP BY businesstravel ORDER BY counts;

9. How are employees categorized by age and gender?

SELECT age, gender, COUNT(\*) AS counts FROM emp\_table GROUP BY age, gender ORDER BY counts;

10. How are employees categorized by marital status and gender?

SELECT maritalstatus, gender, COUNT(\*) AS counts FROM emp\_table GROUP BY maritalstatus, gender ORDER BY counts;

11. How are employees categorized by department and gender?

SELECT department, gender, COUNT(\*) AS counts FROM emp\_table GROUP BY department, gender ORDER BY counts;

12. How are employees categorized by age category and gender?

SELECT age\_category, gender, COUNT(\*) AS count FROM emp\_table GROUP BY age\_category, gender ORDER BY count;

13. How are employees categorized by education field and job role?

SELECT educationfield, jobrole, COUNT(\*) AS count FROM emp\_table GROUP BY educationfield, jobrole ORDER BY count;

14. How are employees categorized by age category and job role?

SELECT age\_category, jobrole, COUNT(\*) AS count FROM emp\_table GROUP BY age\_category, jobrole ORDER BY count;

15. How are employees categorized by department and gender?

SELECT department, gender, COUNT(\*) AS count FROM emp\_table GROUP BY department, gender ORDER BY count;

16. How are employees categorized by attrition and gender?

SELECT attrition, gender, COUNT(\*) AS counts FROM emp\_table GROUP BY attrition, gender ORDER BY counts;

17. How are employees categorized by attrition and age category?

SELECT attrition, age\_category, COUNT(\*) AS counts FROM emp\_table GROUP BY attrition, age\_category ORDER BY counts;

18. How are employees categorized by attrition and business travel?

SELECT attrition, businesstravel, COUNT(\*) AS counts FROM emp\_table GROUP BY attrition, businesstravel ORDER BY counts;

19. How many employees have left based on their education field?

SELECT attrition, educationfield, COUNT(\*) AS counts FROM emp\_table GROUP BY attrition, educationfield ORDER BY counts;

# CONCLUSION

1. NUMBER OF MALE AND FEMALE WORKERS

gender count(\*)

Female 678

Male 998

1. AVERAGE AGE OF FEMALE AND MALE WORKERS

gender avg(age) Female 37.3274

Male 36.5531

1. AVERAGE DAILYRATE FOR THE PEOPLE WHO LEFT AND STAYED

attrition avg(dailyrate)

No 808.4997

Yes 741.6131

1. NUMBER OF PEOLE WITH HIGH,LOW,AVERAGE SALARY

|  |  |
| --- | --- |
| salary\_category | count(\*) |
| Average salary | 492 |
| Low salary | 859 |
| High salary | 325 |
|  |  |
|  |  |

1. NUMBER OF PEOPLE LEFT FROM EACH DEPARTMENT

department num\_left

Maternity 98

Cardiology 74

Neurology 27

6.NUMBER OF PEOPLE LEFT IN EACH AGE CATEGORY

Middle aged adults 80

Young adults 109

Older adults 10

7. NUMBER OF MALE AND FEMALE LEFT

Female 86

Male 113

8.COUNT OF MALE AND FEMALE LEFT FROM EACH BUSINESSTRAVELCATEGORY

businesstravel f\_count m\_count Travel\_Frequently 31 22

Travel\_Rarely 49 77

Non-Travel 6 10

9. AGE CATEGORISED AND NUMBER OF PEOPLE IN EACH CATEGORY

Middle aged adults 1066

Young adults 448

Older adults 162

10.TOTAL PEOPLE IN EACH CATEGORY

Travel\_Rarely 1184

Travel\_Frequently 320

Non-Travel 172

11. NUMBER OF ATTRITED EMPLOYEES BASED ON EDUCATION FIELD

|  |  |
| --- | --- |
| Human Resources | 6 |
| Other | 8 |
| Technical Degree | 22 |
| Marketing | 28 |
| Medical | 51 |
| Life Sciences | 84 |

12. NUMBER EMPLOYEES ARE LESS SATISFIED IN THIS JOB BASED ON MARITAL STATUS

151 Married Employees are not satisfied in this job