HR Analytics Project Report

Introduction:- In today's dynamic corporate environment, managing human resources effectively is crucial to achieving organizational success. Human Resource (HR) Analytics helps businesses leverage data to make informed decisions about employee performance, retention, recruitment, and overall workforce planning. This project focuses on utilizing *Power BI*, a powerful business intelligence tool, to analyze HR data and extract actionable insights.

The purpose of this project is to create a dashboard that provides a comprehensive view of various HR metrics such as employee attrition, demographics, performance, job satisfaction, and department-wise analytics. This will aid HR managers in strategic planning and informed decision-making.

Abstract

The HR Analytics project aims to visualize and analyze employee data using *Power BI* to uncover patterns and trends that can help improve workforce efficiency and reduce attrition. The data used includes employee personal details, departmental distribution, job roles, salaries, and attrition status.

The project delivers interactive dashboards that highlight:

Attrition rate and key contributing factors

Distribution of employees by department, gender, age, and education

Job satisfaction and performance ratings

Tenure analysis and salary trends

Tools Used

- **Power BI Desktop: For data import, data modelling, and dashboard creation**
- **Microsoft Excel: Used as a data source for HR records**
- **Power Query Editor: For data cleaning and transformation**

Steps Involved in Building the Project

- **Data Collection:-**Gathered HR data from Excel, including fields such as Employee ID, Age, Gender, Department, Monthly Income, Job Role, Education, Performance Rating, Job Satisfaction, and Attrition.

- **Data Cleaning and Preparation:-**Used Power Query Editor to remove null values, correct data types, and rename columns for clarity. Ensured consistency in categorical values (e.g., gender, departments).
- **Data Modelling**:- Established relationships between multiple tables (e.g., Employee Details, Department Info, Performance Ratings) and created a star schema for better performance and visualization.

Dashboard Design

Bar Charts: employee by education field, employee by gender

Pie Charts: performance rating by department

KPI Cards: Total Employees, Attrition Rate, Average Salary

Slicers: To filter companies worked with, education field

Line Chart: Trend of attrition over time

Insight Generation

Identified that departments with high attrition had lower job satisfaction and higher workload. Found that certain age groups and job roles were more prone to leaving.

Conclusion

The HR Analytics project successfully demonstrated how Power BI can be leveraged to visualize complex HR data and derive valuable insights. It empowered HR managers with data-driven decision-making capabilities to reduce attrition, improve employee engagement, and allocate resources more efficiently.

This project underlines the importance of integrating business intelligence tools into HR operations for improved transparency, planning, and strategic workforce management.