**Problem Statement: HR Attrition Analysis**

**Background:** Employee attrition is a critical concern for organizations as it can lead to increased recruitment costs, loss of knowledge, and disruption in operations. HR departments strive to understand the factors contributing to employee turnover and develop strategies to mitigate attrition rates.

**Objective:** The objective of this project is to analyze employee attrition data and identify key factors influencing employee turnover. By understanding the drivers of attrition, HR departments can implement targeted retention strategies to improve employee satisfaction and reduce turnover rates.

**Dataset:** The dataset contains historical employee data, including demographic information, job-related attributes, performance metrics, and attrition status (whether the employee has left the company or not). Key attributes may include:

1. **Employee Demographics:**
   * Age
   * Gender
   * Marital Status
   * Education Level
   * Years at Company
2. **Job-related Attributes:**
   * Job Role
   * Department
   * Job Level
   * Monthly Income
   * Years in Current Role
3. **Performance Metrics:**
   * Performance Rating
   * Work-Life Balance
   * Job Satisfaction
   * Environment Satisfaction
4. **Attrition Status:**
   * Attrition (Yes/No)

**Analysis Tasks:**

1. **Descriptive Analysis:**
   * Explore the dataset to understand the distribution of key attributes.
   * Calculate summary statistics for numerical variables and frequency distributions for categorical variables.
   * Visualize the distribution of employees by age, gender, job role, department, etc.
2. **Attrition Analysis:**
   * Analyze the attrition rate and identify trends over time.
   * Determine the proportion of employees who have left the company.
   * Investigate the reasons for attrition based on demographic and job-related factors.
3. **Factors Influencing Attrition:**
   * Perform correlation analysis to identify relationships between attrition and other variables.
4. **Retention Strategies:**
   * Develop actionable insights and recommendations based on the analysis findings.
   * Propose retention strategies to address the identified drivers of attrition.
   * Evaluate the potential impact of retention initiatives on reducing attrition rates and improving employee satisfaction.

**Conclusion:** The HR Attrition Analysis project aims to provide HR departments with valuable insights into employee turnover and retention strategies. By understanding the factors influencing attrition, organizations can proactively address employee needs and create a more engaged and productive workforce.

Top of Form