

PROJECT SUMMARY: HR Data Analysis with Power BI

The **HR Data Analysis** project leverages the power of **Microsoft Power BI** to explore and visualize employee-related data to support strategic decision-making within an organization. The analysis covers a range of critical HR metrics such as **attrition**, **job satisfaction**, **employee demographics**, **work-life balance**, **performance ratings**, and **income levels**. The main goal is to understand the factors affecting employee turnover and overall workforce engagement.

Objectives

- Identify patterns and trends in employee attrition.
- Analyze the impact of overtime, job satisfaction, and work-life balance on employee retention.
- Evaluate departmental performance in terms of employee satisfaction and turnover.
- Provide data-driven insights to help HR teams reduce attrition and improve retention strategies.

Key Features & Dashboards

- **Attrition Overview:** Shows total attrition rate and high-risk departments.
- **Employee Demographics:** Includes gender, age, and departmental distribution.
- **Job Satisfaction & Work-Life Balance:** Visuals correlating satisfaction levels with attrition.
- **Performance Ratings:** Distribution of performance scores and their impact on retention.
- **Monthly Income Analysis:** Breakdown of salary trends by department and role.
- **Tenure Analysis:** Attrition by years at company, indicating early-exit trends.

Insights Extracted

- **Overtime** significantly contributes to higher attrition.
- Employees with **lower job satisfaction** are more likely to leave.
- **Attrition is highest** among employees with less than 3 years of tenure.
- Departments like **Sales and HR** often experience higher turnover rates.
- **Balanced work-life** conditions lead to better retention.

Data Overview

The dataset typically contains:

- Personal attributes (e.g., Age, Gender, Marital Status)
- Professional data (e.g., Job Role, Department, Performance Rating)
- Employment metrics (e.g., Years at Company, OverTime, Monthly Income)
- Engagement indicators (e.g., Satisfaction Level, WorkLifeBalance, Attrition)

Tools Used

- **Power BI Desktop:** Data modeling, transformation, and visualization
- **Power Query:** Data cleaning and preparation
- **DAX (Data Analysis Expressions):** Calculated measures and KPIs

Use Cases

- Ideal for HR professionals and analysts to monitor workforce dynamics.
- Can be integrated into performance reviews, retention strategies, and policy planning.
- Serves as a case study for HR analytics projects or dashboard development training