\*\*Project Report: HR Analytics\*\*

1. Introduction

Employee attrition is a critical issue for businesses, affecting workforce planning, productivity, and costs. This project leverages HR data to analyse and predict attrition patterns, helping the company understand key factors contributing to employee turnover.

1. Objective

To build a data-driven HR analytics model that:

* + Identifies major factors leading to employee attrition.
  + Predicts whether an employee is likely to leave.
  + Provides actionable insights to reduce future attrition.

1. Tools & Technologies Used
   * Python: Pandas, Seaborn, Scikit-learn
   * Power BI: Interactive dashboard for insights visualization
2. Data Description

The dataset included information about 1,470 employees across 35 attributes such as age, income, distance from home, job role, satisfaction scores, and attrition status.

1. Methodology
2. Exploratory Data Analysis (EDA):
3. Modeling:

* Applied classification model (Logistic Regression).

1. Dashboard Design (Power BI)
   * KPIs: Attrition Rate, Total Employees, Avg Income & Age
   * Slicers: Gender, Department, Education Field
2. Key Insights
   * Employees doing overtime were 2.5x more likely to leave.
   * Job satisfaction and distance from home had strong influence on attrition.
   * Sales Executive and Lab Technician roles showed higher turnover.
3. Recommendations
   * Limit excessive overtime through policy or support.
   * Improve job satisfaction with targeted surveys and manager training.
   * Introduce flexibility or relocation assistance for long-distance commuters.
4. Learning & Outcome

This internship sharpened my analytical thinking and problem-solving skills. I learned how to turn data into actionable insights and present them visually. It gave me hands-on experience with real-world business challenges and strengthened my interest in data analytics and decision science.

1. Conclusion

This project demonstrated how data analytics can help companies not just understand employee behaviour but also proactively manage and retain talent through informed decision-making.

Submitted by:

Ayush Rajput