**HR Analytics - Predict Employee Attrition**

1. Objective:

Use analytics to understand the main causes of employee resignation and predict future attrition.

1. Tools:

Python (Pandas, Seaborn), Power BI, Sklearn

1. Mini Guide:

* Perform EDA on HR data (department-wise attrition, salary bands, promotions)
* Build a classification model (Logistic Regression or Decision Tree)
* Visualize attrition factors using Power BI
* Perform SHAP value analysis to explain model predictions

1. Deliverables:

* Power BI dashboard
* Model accuracy report + confusion matrix
* PDF of attrition prevention suggestions

1. Attrition Prevention Suggestions

Based on the analysis, here are some actionable suggestions to prevent employee attrition:

a. Enhance Employee Engagement

* Issue: Low engagement levels can lead to higher attrition.
* Suggestion: Implement regular feedback sessions, recognize employee achievements, and foster a positive work environment.

b. Career Development Opportunities

* Issue: Lack of growth prospects may cause employees to leave.
* Suggestion: Provide clear career paths, training programs, and mentorship opportunities.

c. Competitive Compensation

* Issue: Inadequate salary and benefits can result in attrition.
* Suggestion: Conduct market salary surveys and adjust compensation packages accordingly.

d. Work-Life Balance

* Issue: Excessive workload and lack of flexibility can lead to burnout.
* Suggestion: Promote flexible working hours, remote work options, and ensure manageable workloads.

e. Management Training

* Issue: Poor management practices can drive employees away.
* Suggestion: Invest in leadership development programs to enhance managerial skills.