📊 HR Analytics – Exploratory Data Analysis (EDA) with Python

- **Objective:**

The primary goal of this project is to analyze HR data to uncover key insights about employee behavior, attrition, satisfaction levels, and work environment. By performing exploratory data analysis (EDA), we aim to help HR departments make data-driven decisions to improve employee retention and organizational health.

Dataset Overview:

The dataset typically includes features like:

* Employee ID, Age, Gender

* Department, Job Role, Education

* Monthly Income, Years at Company

* Job Satisfaction, Work-Life Balance

* Attrition (Yes/No)

Key Insights:

1. **Attrition Trend:**

Younger employees (age 25-35) showed higher attrition rates.

Departments like Sales and R\&D experienced the most attrition.

2. **Income and Attrition:**

- Employees with lower monthly income (< ₹30,000) had a higher tendency to leave the company.

3. **Work-Life Balance:**

- A poor work-life balance correlated strongly with higher attrition.

4. **Job Satisfaction:**

- Employees rating job satisfaction < 3 on a scale of 1-5 were more likely to leave.

5. **Years at Company:**

- Most attrition occurred in employees with less than 3 years of experience.

6. Gender Balance:

- Males were slightly more represented in high-turnover departments.

Tools Used:

- Python(Pandas, Matplotlib, Seaborn)
- Jupyter Notebook

Visuals Included:

* Attrition by Department (Bar chart)

* Monthly Income vs Attrition (Box plot)

* Job Satisfaction Distribution (Histogram)

* Correlation Heatmap for all numerical features

Conclusion:

By analyzing these trends, HR teams can identify at-risk employees, enhance workplace policies, and make proactive interventions to reduce attrition.
