

IBM HR Analytics – Employee Attrition Analysis

Internship: Unified Mentor – Data Analyst

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Tools Used: Python (Pandas, Matplotlib, Seaborn)

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1. Project Overview

This project analyzes employee attrition using IBM HR Analytics data to identify key factors influencing employee turnover.

2. Objectives

- Understand employee attrition patterns
- Analyze demographic and job-related factors
- Provide actionable business recommendations

3. Dataset Description

The dataset contains 1,470 employee records with attributes related to demographics, job role, income, and satisfaction.

4. Data Cleaning & Preparation

Missing values were handled, categorical variables encoded, and data consistency verified.

5. Exploratory Data Analysis

Visualizations analyzed attrition by age, gender, department, income, overtime, and job role.

6. Key Insights

- Higher attrition among younger employees
- Overtime strongly linked with attrition
- Sales roles show higher turnover

7. Business Recommendations

- Reduce overtime workload
- Improve employee engagement
- Focus retention efforts on high-risk roles

8. Conclusion

The analysis provides meaningful insights to help HR teams reduce attrition and improve workforce stability.

Note: Interactive features such as scrolling and filters are available in the Power BI file.

