

# IBM HR Analytics – Employee Attrition Analysis

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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.

