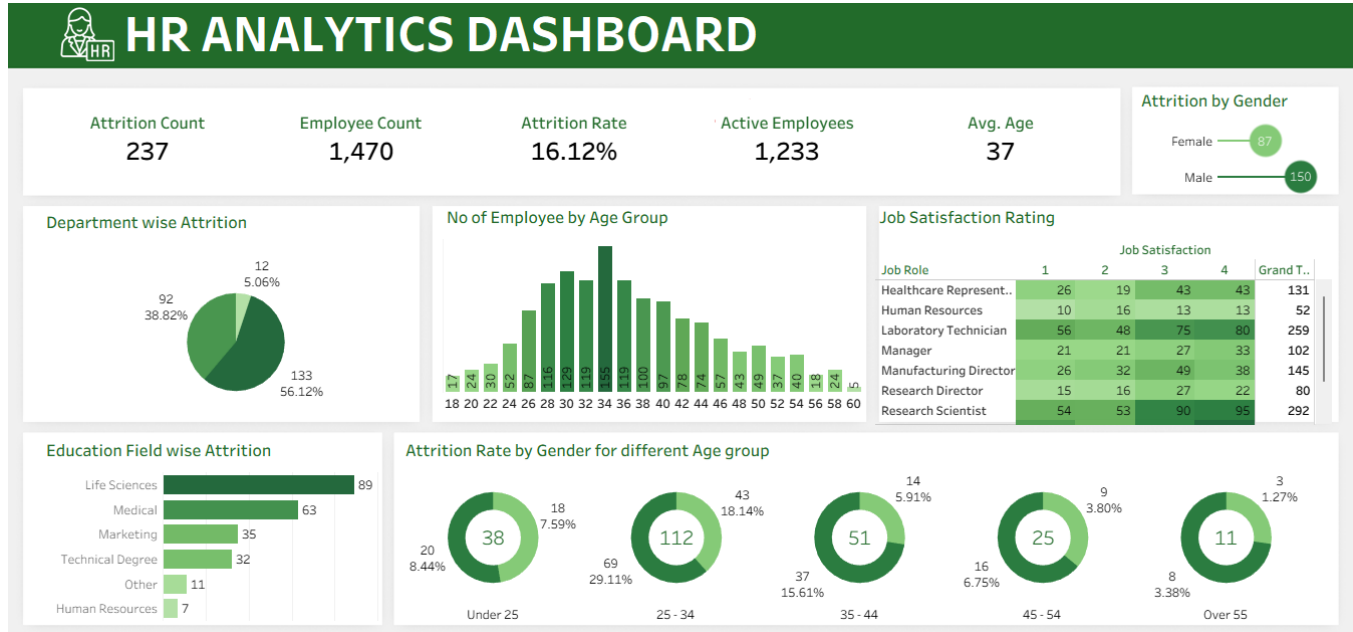# HR Analytics Dashboard – Project Report

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https://github.com/KumarBoste/HR_Analytics_Dashboard

Project Abstract

The HR Analytics Dashboard project focuses on analyzing employee data to identify key factors influencing workforce performance and attrition. Using Tableau, the dashboard visualizes critical HR metrics such as employee count, attrition rate, department-wise distribution, job satisfaction, and demographic trends. Statistical analysis and interactive visualizations help uncover patterns related to employee turnover, satisfaction levels, and tenure. The insights generated support data-driven HR decision-making, enabling organizations to improve retention strategies, optimize workforce planning, and enhance overall employee engagement. This project demonstrates the practical application of business intelligence tools in transforming raw HR data into actionable organizational insights.

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1. Project Objective

The primary objective of the HR Analytics Dashboard is to analyze employee-related data to help HR teams make data-driven workforce decisions.
This dashboard focuses on understanding employee attrition, workforce demographics, job satisfaction, performance trends, and departmental distribution to improve employee retention, productivity, and organizational efficiency.

2. Problem Definition & Key Business Questions

Problem Definition

Organizations face challenges in managing employee attrition, maintaining workforce satisfaction, and optimizing human resource strategies. Without analytical insights, HR decisions are often reactive rather than proactive.

Key Questions Based on Insights

1. What is the overall employee attrition rate?

2. Which departments and job roles have the highest attrition?

3. How does age, gender, and education impact attrition?

4. Is there a relationship between job satisfaction, performance rating, and attrition?

5. Does salary level and years at company influence employee turnover?

6. Which employee segments are at higher risk of leaving?

3. Statistical Analysis

The following analytical methods are used in the project:

- Descriptive Statistics

    o Total employees

    o Active employees

    o Attrition count and attrition rate

- Percentage & Ratio Analysis

- o   Attrition by department, gender, age group

- Trend Analysis

  - o   Attrition across experience levels and tenure

- Comparative Analysis

  - o   Job satisfaction vs attrition

  - o   Salary slab vs attrition

- Distribution Analysis

  - o   Workforce distribution across departments, job roles, and education fields

4. Data Visualization & Insights

Key Visuals Used

- KPI Cards: Total Employees, Attrition Count, Attrition Rate

- Bar Charts: Attrition by Department, Job Role, Age Group

- Pie / Donut Charts: Gender-wise employee distribution

- Stacked Charts: Job satisfaction vs attrition

- Heatmaps: Performance rating vs attrition

- Filters: Department, Gender, Education, Job Role

Insights Derived

- Certain departments show significantly higher attrition rates

- Employees with low job satisfaction have a higher probability of leaving

- Attrition is more prominent in early career stages

- Lower salary slabs show higher employee turnover

- Male/Female attrition varies across departments and roles

5. Best Solutions & Recommendations

1. Targeted Retention Strategies

   o Focus retention programs on high-attrition departments

2. Improve Job Satisfaction

   o Employee engagement activities and feedback mechanisms

3. Compensation Optimization

   o Review salary structures for high-risk employee groups

4. Career Growth Planning

   o Clear promotion paths and skill development initiatives

5. Early Attrition Monitoring

   o Identify at-risk employees within first few years of tenure

6. Data-Driven HR Policies

   o Use dashboards regularly for workforce planning and forecasting

6. Conclusion

The HR Analytics Dashboard provides actionable insights into employee attrition and workforce behaviour. By leveraging Tableau visualizations and statistical analysis, HR teams can identify high-risk areas, optimize retention strategies, and enhance overall employee satisfaction.

This project demonstrates how business intelligence tools can transform raw HR data into meaningful insights that support strategic HR decision-making.