Project Report

Title:	Human Resources Analytics Dashboard
Tools Used:	PowerBI

1. Executive Summary

This report presents an HR Analytics Dashboard created using Power BI, based on the dataset `HRDataset_v14.csv`. The objective is to gain insights into key HR metrics such as employee distribution, attrition, performance, absenteeism, and salary-demographic relationships. The dashboard is designed to support data-driven HR decisions and strategic planning.

2. Dashboard Overview

The dashboard consists of four main pages:

Page 1: Employee Overview

- **Metrics Displayed:**

    - Total Employees

    - Active vs. Terminated Employees

- **Visualizations:**

    - **Donut Charts**: Gender and Department distribution

    - **Line Chart**: Hiring trend over time (based on `DateofHire`)

- **Insights:**

- ○ Clear view of hiring patterns and current workforce composition.

  - ○ Identifies departments with gender imbalances or growth trends.

Page 2: Attrition Analysis

- **Metrics Displayed:**

  - ○ Termination % by Department, Gender, and Race

  - ○ Average Tenure (calculated from `DateofHire` to `DateofTermination`)

- **Visualizations:**

  - ○ **Bar Charts**: Termination % by categories

  - ○ **Pie Chart / Bar Chart**: Common reasons for termination (`TermReason`)

  - ○ **KPI Card**: Average Tenure in years

- **Insights:**

  - ○ Departments or demographic groups with high attrition are easily identified.

  - ○ Common termination reasons highlight areas needing HR policy review.

  - ○ Average tenure helps track employee retention effectiveness.

Page 3: Performance & Satisfaction

- **Metrics Displayed:**

  - ○ Average Performance Score by Department

  - ○ Engagement Survey vs. Performance Score correlation

  - ○ Employee Satisfaction Scores

- **Visualizations:**

    - **Bar Chart**: Avg. Performance Score per Department

    - **Scatter Plot**: Engagement Survey vs. Performance Score

    - **Heatmap or Bar**: Satisfaction levels

- **Insights:**

    - Links between engagement and performance help improve HR strategy.

    - Highlights departments with high or low satisfaction and performance.

Page 4: Absenteeism

- **Metrics Displayed:**

    - Top 5 Employees with Highest Absences

    - Days Late and Absences by Department

    - Absenteeism Trends Over Time

- **Visualizations:**

    - **Table / Bar Chart**: Top 5 Absentees

    - **Stacked Bar**: Department-wise Days Late and Absences

    - **Line Chart**: Trends over time

- **Insights:**

    - Identifies absenteeism hotspots by department or individuals.

    - Trend analysis aids in scheduling and planning resources better.

3. Tools and Techniques

- **Tool Used**: Power BI

- **Data Cleaning**: Handled missing termination dates, converted date formats, calculated tenure

- **DAX Measures**:

    - Active % and Terminated %

    - Average Tenure (in years)

    - Average Performance Score

- **Calculated Columns**:

    - Status (Active/Terminated)

    - Year of Hire

4. Key Insights Summary

- Employee growth peaked in specific years, showing hiring trends.

- Termination rates vary significantly across departments and genders.

- Performance and engagement are positively correlated in many departments.

- Salary disparities exist across races and citizenship statuses, warranting deeper HR review.

- Absenteeism patterns suggest need for stricter attendance policies in certain teams.

5. Conclusion

The HR Analytics Dashboard enables leadership and HR teams to:

- Monitor workforce dynamics

- Make evidence-based decisions

- Identify issues in retention, diversity, performance, and absenteeism

Further analysis can incorporate predictive models for attrition or employee promotion to extend this dashboard's value.