PROJECT REPORT

HR ANALYTICS DASHBOARD

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Submitted to: Unified Mentor Private Limited, Gurugram

Date: 15 October 2025

ABSTRACT

The **HR ANALYTICS DASHBOARD PROJECT** has been developed to analyze and visualize employee-related data with a focus on **attrition, satisfaction, performance, and tenure**. Employee turnover is a major concern for organizations as it impacts costs, productivity, and overall growth. To address this, an interactive dashboard was created using **Microsoft Power BI**, which provides HR managers and decision-makers with real-time insights for better workforce planning.

The dataset used in this project included details such as demographics, tenure, performance ratings, satisfaction scores, and turnover status. After data preparation, the dashboard was designed to showcase **key performance indicators (KPIs)** including **Turnover Rate %, Average Performance Score, Average Satisfaction Score, and Average Tenure**. In addition, visualizations such as bar charts, pie charts, and trend analyses were incorporated to explore **department-wise performance, age group–wise attrition, gender distribution, and termination reasons**. Interactive **slicers** (Department and Turnover Status) make the dashboard more dynamic and user-friendly.

The analysis revealed that employees with **low satisfaction and poor performance scores** are more likely to leave the company. The most common termination reasons identified were **"More Money"** and **"Unhappy,"** which highlight the importance of competitive pay and employee engagement initiatives. The dashboard serves as a valuable tool for HR teams, enabling them to **track attrition patterns, identify problem areas, and implement data-driven strategies** to improve employee retention and satisfaction.

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INTRODUCTION

Human Resources (HR) is one of the most critical functions of any organization, responsible for managing talent, employee engagement, and workforce productivity. In today's competitive environment, organizations face significant challenges such as **high employee turnover, declining job satisfaction, and uneven performance levels**. These issues directly affect operational efficiency and long-term business growth.

To address these challenges, the **HR Analytics Dashboard** was developed using **Microsoft Power BI**. The main purpose of this project is to transform raw employee data into **interactive visual insights** that help HR managers and business leaders make informed decisions. By consolidating key metrics into one platform, the dashboard provides a clear overview of the organization's workforce health.

The dashboard primarily focuses on four important **Key Performance Indicators (KPIs)**:

- **Turnover Rate %** – to measure overall attrition.

- **Average Performance Score** – to track workforce productivity.

- **Average Satisfaction Score** – to assess employee engagement levels.

- **Average Tenure (Years)** – to understand workforce stability.

Apart from these KPIs, the dashboard includes **department-wise performance and satisfaction analysis, gender distribution, age group–wise attrition, and termination reasons**. Interactive **slicers** (Department and Turnover Status) make the dashboard flexible, allowing users to analyze overall patterns or drill down into specific segments.

Overall, the project highlights how **data analytics can be applied in HR** to move from reactive problem-solving to **proactive workforce management**. This dashboard acts as a decision-support system that enables management to identify attrition risks, improve employee engagement, and build a stable and motivated workforce.

OBJECTIVES

The main objective of the **HR Analytics Dashboard Project** is to convert employee-related data into meaningful insights that can support better decision-making for HR managers and leadership. Specifically, the project was designed to:

1. **Analyze Employee Turnover**

   o To calculate and monitor the **turnover rate %**, helping the organization understand the scale of attrition.

2. **Track Department-wise Satisfaction and Performance**

   o To compare how different departments perform in terms of employee satisfaction and productivity, and identify areas needing improvement.

3. **Identify Key Termination Reasons**

   o To highlight the most common reasons for employee attrition (e.g., "More Money," "Unhappy"), enabling management to address critical HR challenges.

4. **Examine Demographic Patterns**

   o To study **age group–wise** and **gender-wise** attrition trends for better workforce planning.

5. **Provide Real-time Interactive Insights**

   o To design an **interactive dashboard** with slicers (Department, Turnover Status), enabling HR teams to drill down and analyze data dynamically.

6. **Support Retention Strategies**

   o To assist HR leaders in formulating **data-driven strategies** for improving employee engagement, reducing attrition, and enhancing overall workforce stability.

KEY INSIGHTS FROM DASHBOARD

The HR Analytics Dashboard provided a comprehensive overview of employee dynamics across multiple dimensions such as attrition, satisfaction, performance, age, gender, and departmental trends. The key insights derived from the dashboard are summarized below:

3.1 Attrition Overview

- The overall employee turnover rate was observed at 33.44%, a figure that reflects a significant retention challenge for the organization.

- Employees with low satisfaction scores and those categorized under poor performance ratings were found to be the most vulnerable to attrition.

- A clear difference was noted between employees who were satisfied and actively engaged versus those who reported disengagement. While engaged employees showed longer tenure, dissatisfied ones had a much higher termination likelihood.

- These results highlight the importance of building strong engagement programs and performance support systems to prevent unnecessary attrition.

3.2 Department-wise Analysis

- Attrition was not uniform across the organization. Departments such as Sales and IT exhibited higher turnover rates, often linked to high job demands and competitive external opportunities.

- Departments like Finance, HR, and Operations demonstrated relatively lower attrition, correlating with stable performance and higher satisfaction levels.

- These findings indicate that attrition challenges are department-specific and require targeted retention strategies rather than a one-size-fits-all approach.

3.3 Satisfaction and Performance Trends

- Performance scores were directly correlated with attrition:

  - Employees rated as "Exceeds Expectations" and "Fully Meets Expectations" had much higher retention levels.

  - Those in "Needs Improvement" or "PIP" categories faced the highest attrition rates.

- Similarly, satisfaction levels were found to be strong predictors of retention. Employees with higher satisfaction scores were both more productive and more committed to staying with the organization.

- This reinforces the idea that performance management, skill development, and employee engagement are crucial levers to improve retention.

3.4 Termination Reasons

- The most commonly cited reasons for leaving were "More Money" and "Unhappy."

- "More Money" reflects financial-driven attrition, suggesting that compensation levels may not be competitive compared to market benchmarks.

- "Unhappy" highlights cultural or engagement issues, including dissatisfaction with work environment, recognition, or career progression.

- Other reasons such as "Another Position" and "Still Employed" were recorded but less significant.

- Together, these reasons highlight the dual need for both competitive pay structures and non-financial motivators such as recognition and growth opportunities.

3.5 Demographic Insights (Age & Gender)

- Attrition was most concentrated among employees with tenure of 0–3 years, suggesting that early-stage engagement and onboarding processes need to be strengthened.

- Mid-level employees also displayed moderate attrition, often driven by career advancement opportunities outside the organization.

- Senior employees, however, showed greater stability and commitment, reinforcing the value of long-term engagement.

- Gender analysis showed an overall balanced distribution between male and female employees. However, female employees reported slightly lower satisfaction levels in specific departments, pointing towards the need for gender-sensitive engagement policies.

3.6 Overall Summary of Insights

- Attrition is most strongly driven by low satisfaction and poor performance levels.

- Certain departments face higher turnover challenges and require customized interventions.

- Compensation remains a critical driver of attrition, alongside employee morale and cultural factors.

- Younger employees are the most at risk of leaving early, making onboarding and early development crucial.

- Gender balance is maintained overall, but targeted inclusivity measures could further enhance engagement.

DASHBOARD / VISUALIZATION

The HR Analytics Dashboard was developed in Microsoft Power BI with a focus on clarity, interactivity, and professional design. The dashboard consolidates multiple HR metrics into a single, easy-to-navigate interface, ensuring that HR managers and decision-makers can quickly identify workforce trends and take timely actions.

A consistent color-coding logic was applied across all visuals to maintain readability and improve user understanding:

- Blue → Active Employees / Fully Meets

- Orange → Terminated Employees / Needs Improvement

- Green → Exceeds Expectations / Positive Metrics

- Red → PIP / Negative Metrics

- Grey → Neutral or Other Categories

Key Components of the Dashboard:

1. **Key Performance Indicators (KPIs)**

   o Displayed at the top of the dashboard for quick insights.

   o Included metrics such as:

     ▪ Turnover Rate %

     ▪ Average Performance Score

     ▪ Average Satisfaction Score

     ▪ Average Tenure (Years)

   o KPI cards were formatted with bold fonts and professional color highlights to ensure visibility.

2. **Attrition Overview (Active vs Terminated)**

   o A bar/column chart illustrating the distribution of active employees versus terminated employees.

   o Clear distinction made through blue for active and orange for terminated, ensuring immediate understanding of workforce stability.

3. **Department-wise Satisfaction and Performance**

   o A clustered bar chart comparing satisfaction and performance levels across departments.

   o Categories coded as: Green = Exceeds, Blue = Fully Meets, Orange = Needs Improvement, Red = PIP.

o   This visualization made it easy to identify departments facing performance and satisfaction challenges.

4. **Age Group Analysis**

    o   Attrition analyzed across different age groups, showing that younger employees (0–3 years tenure) were most likely to leave.

    o   This visual highlights the importance of early-career engagement and onboarding processes.

5. **Gender Distribution**

    o   A simple bar or donut chart representing gender ratio across the workforce.

    o   Ensured clarity and quick understanding of diversity balance within the organization.

6. **Termination Reasons (Pie Chart)**

    o   A pie chart displaying the proportion of termination reasons.

    o   Color coding applied as: Blue = Still Employed, Orange = Another Position, Red = Unhappy, Green = More Money, Grey = Others.

    o   Data labels placed outside end for better readability, ensuring minimal overlap and a clean, modern design.

7. **Interactive Slicers**

    o   Department Slicer – allows filtering the entire dashboard by department.

    o   Turnover Status Slicer – enables focused analysis on active vs. terminated employees.

    o   These slicers enhance the interactivity of the dashboard, making it flexible for multiple user requirements.

    Design Approach

*   A minimal and professional theme was selected from Power BI, with clean fonts and consistent use of cyan for titles.

*   Data labels were optimized to avoid overlap and maintain readability.

*   Borders around visuals were removed to achieve a modern, uncluttered look.

*   Fonts inside KPI cards were kept bold for emphasis, while chart fonts were normal for visual balance.
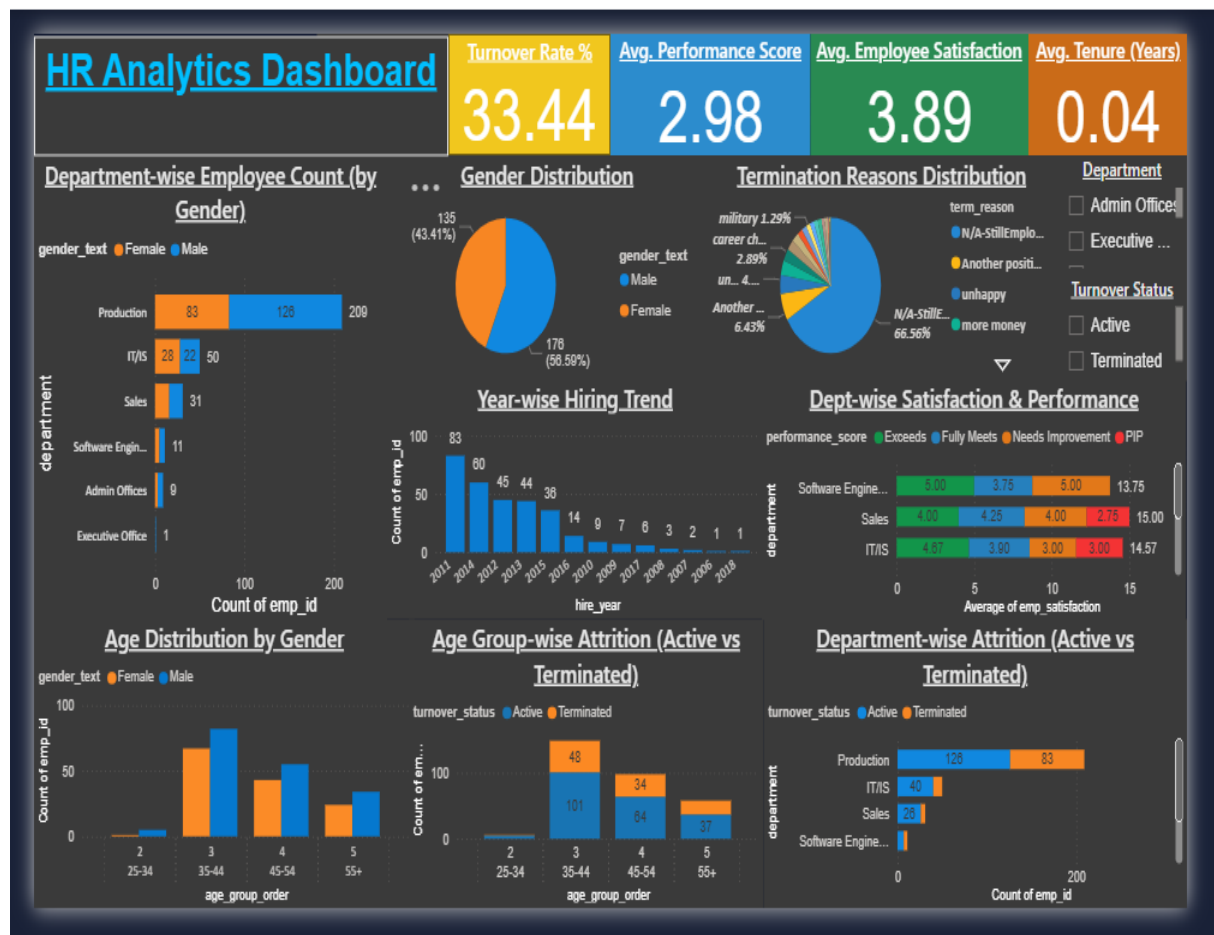
FINAL HR ANALYTICS DASHBOARD

INSIGHTS & IMPLICATIONS

The analysis of the HR Analytics Dashboard highlights several important insights, each of which has direct implications for organizational policy and workforce management. These findings go beyond simple reporting and provide guidance for **strategic HR decision-making**.

1. Compensation and Retention

- **Insight:** "More Money" was the most frequent termination reason, indicating that many employees left for better-paying opportunities.

- **Implication:** The organization must regularly **benchmark salaries** against industry standards and design **competitive compensation packages** to reduce financial-driven attrition.

2. Employee Engagement and Satisfaction

- **Insight:** "Unhappy" emerged as another leading termination reason, showing that dissatisfaction with work culture or role is a major driver of turnover.

- **Implication:** HR should focus on **engagement initiatives**, such as recognition programs, wellness activities, mentorship, and clear career growth opportunities to enhance employee morale and loyalty.

3. Performance Management

- **Insight:** Attrition was concentrated among employees rated as **"Needs Improvement"** or on **PIP**.

- **Implication:** This highlights the need for robust **training, reskilling, and performance support programs**. Instead of waiting for employees to leave, the organization can proactively help them improve and grow.

4. Department-specific Retention Challenges

- **Insight:** Sales and IT departments recorded significantly higher turnover rates compared to other areas.

- **Implication:** HR must adopt **department-focused interventions**, such as workload balancing, improved resource allocation, and targeted retention strategies for high-risk teams.

5. Demographic Trends

- **Insight:** Younger employees (0–3 years tenure) showed the highest turnover, while senior employees were relatively stable.

- **Implication:** The organization should enhance **onboarding, early engagement, and career development programs** to retain younger talent and reduce early exits.

6. Gender Considerations

- **Insight:** Gender distribution was balanced overall, but female employees showed slightly higher dissatisfaction levels in some departments.

- **Implication:** Companies should implement **gender-sensitive policies, mentorship for women employees, and inclusivity measures** to strengthen engagement across all groups.

Overall Implication

The HR Analytics Dashboard makes it clear that attrition is not just a number but a **multi-dimensional problem** influenced by pay, performance, satisfaction, and department culture. By addressing these areas through **data-driven strategies**, the organization can:

- Reduce attrition costs.

- Improve employee satisfaction and productivity.

- Build a stronger, more engaged, and future-ready workforce.

CONCLUSION

The **HR Analytics Dashboard Project** has successfully demonstrated the value of applying business intelligence tools to Human Resources management. By leveraging Microsoft Power BI, raw employee data was transformed into an interactive, visually intuitive, and actionable dashboard that supports data-driven decision-making.

The analysis confirmed that **attrition is strongly linked with compensation, satisfaction, and performance levels**. Departments such as Sales and IT require targeted retention policies, while younger employees (0–3 years tenure) need stronger onboarding and career development support. Termination reasons such as **"More Money"** and **"Unhappy"** emphasized the importance of both financial and non-financial factors in retention.

From a strategic standpoint, the project highlights that organizations must move beyond reactive HR measures and adopt a **proactive, analytics-driven approach**. With real-time dashboards, HR leaders can:

- Monitor turnover and performance continuously.

- Identify at-risk employees or departments early.

- Implement tailored strategies for retention and engagement.

- Align HR initiatives with broader business goals.

Overall, the HR Analytics Dashboard serves not just as a reporting mechanism but as a **strategic enabler**. It empowers organizations to make **evidence-based HR decisions**, reduce turnover-related costs, improve employee satisfaction, and build a more motivated and future-ready workforce.

This project demonstrates how the integration of HR Analytics into organizational processes can deliver long-term value by combining **data, strategy, and human capital management**.