

HR Attrition Analysis Dashboard



Project Overview

Employee attrition presents a critical challenge for organizations, affecting workforce stability and operational efficiency. This project conducts a comprehensive analysis of HR attrition data, employing advanced analytics and interactive visualization through Power BI. The goal is to uncover key drivers of employee turnover and provide actionable, data-driven insights for strategic decision-making.

Project Workflow

1. Data Preparation:

The dataset was meticulously cleansed and transformed using Power Query in Power BI to ensure accuracy and consistency. Key steps included:

- Removing redundancies and handling missing data.
- Standardizing categorical variables to enhance uniformity.
- Creating derived metrics, such as "Years at Company" and attrition indices, to enrich the dataset.

2. Exploratory Data Structuring:

Initial analyses were conducted using Excel pivot tables to identify patterns and formulate hypotheses. Key discoveries included:

- Attrition trends across demographic and professional attributes.
- Variability in tenure, compensation, and job roles.

3. Dashboard Development:

The refined dataset was visualized through an interactive Power BI dashboard, designed with:

- Dynamic, multi-layered graphics for comprehensive exploration.
- User-driven filters and slicers to tailor insights.
- A cohesive structure that tells a compelling narrative.

Key Metrics and Features

The dashboard provides a multidimensional analysis of attrition, including:

- **Workforce Demographics:** Aggregate metrics such as total employee count and average age.
- **Attrition Dynamics:** Trends in turnover rates segmented by key factors.
- **Detailed Segmentation:**
 - Attrition by education level, age, and tenure.
 - Correlations between job satisfaction scores (rated 1-4) and attrition.
 - Analysis of salary ranges in relation to attrition trends.
 - High-turnover job roles identified for targeted action.

Analytical Insights

1. High Attrition Among Early-Career Employees:

Employees with approximately one year of tenure accounted for the highest attrition, with 59 departures recorded.

2. Impact of Job Satisfaction:

Lower job satisfaction scores were significantly correlated with higher attrition, particularly among lab technicians, who experienced 62 departures.

3. Compensation Disparities:

Unequal salary structures emerged as a key attrition driver, highlighting the need for equitable pay practices.

Interpretive Narrative

This analysis highlights the complex factors influencing employee retention. Recommendations include:

- Implementing mentorship programs and professional growth opportunities to support early-career employees.
- Addressing job-specific challenges to improve satisfaction and retention.
- Revising salary frameworks to ensure internal equity and competitiveness.

Conclusion

The HR Attrition Analysis Dashboard transcends traditional reporting by providing an interactive platform to diagnose and mitigate workforce challenges. It empowers decision-makers with a data-driven perspective to proactively manage attrition and foster organizational resilience.