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PROJECT REPORT

SUBJECT NAME: DATA ANALYTICS
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23MAM2
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PROJECT TITLE:
HR ANAYLTICS DASHBOARD

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INTRODUCTION

This HR analytics PowerBI project is aimed at providing HR managers and business leaders a comprehensive way to analyze and monitor employee data, and make data-driven decisions related to employee retention, development, and recruitment.

This includes trendline and target line to help HR managers track progress toward reducing attrition. It has charts showing the distribution of employees and attrition rate by gender, age group, job satisfaction and education field. The chart includes legends and interactive filters to allow HR managers to drill down and explore the data further.

This report provides insights derived from an HR Analytics Dashboard. The data presented aims to offer a comprehensive view of the organization's workforce in terms of attrition, employee demographics, satisfaction, and other critical HR metrics. This analysis is essential for understanding employee turnover, satisfaction rates, and the factors influencing attrition.

TECHNOLOGIES USED

- Advanced Excel
- power bi
- Statistics

STEPS OVERVIEW:

- Data subset collected from online.
- Understanding the Data.
- Loading Libraries.
- Data Cleaning & Finding Missing values.
- Data Visualization.

DATA CLEANING:

- Open Dataset in Excel and Make a Copy of Dataset for security purpose.
- Remove Duplicates.
- Change the formatting of necessary columns.
- Spell Check.
- Change Case - Lower/Upper/Proper.
- Trim the unwanted spaces.
- Remove null values if its not going to affect the result.
- Find & Replace.

1. Executive Summary

Purpose: This report analyzes employee attrition data to provide insights into workforce trends and factors affecting turnover in the company. High attrition can be costly, impacting productivity, morale, and organizational knowledge.

Key Metrics:

Total Employees: 132
Attrition Count: 32
Attrition Rate: 24.2%
Average Age: 36.12 years
Average Salary: 5.8K
Average Working Years: 6.59 years

Objective: Identify patterns and potential drivers of attrition to inform retention strategies and improve employee satisfaction.

2. Introduction

Background: Attrition analysis is a crucial HR function. High turnover can indicate dissatisfaction, lack of growth opportunities, or external factors like competitive job markets.

Goals of Analysis: By examining education, age, gender, salary, tenure, job role, and department, this report aims to identify where and why attrition is most pronounced.

Relevance: This analysis will help HR and management teams understand which employee segments are at higher risk of leaving and develop targeted retention strategies.

3. Data Summary and Key Metrics

Count of Employees: This metric represents the total number of employees currently tracked by the organization.

Attrition Count and Rate: With 32 employees leaving out of 132, the attrition rate stands at 24.2%, suggesting a significant turnover rate that needs addressing.

Average Age: The average age is 36.12 years, placing most employees in mid-career stages. This age group may seek growth opportunities, stability, or higher compensation.

Average Salary: At 5.8K, the average salary is a potential factor impacting retention, especially if industry benchmarks are higher.

Average Working Years: An average tenure of 6.59 years indicates some stability; however, specific segments, such as new hires, show different patterns that require separate analysis.

4. Attrition by Education

Breakdown:
Life Sciences: 38%
Medical: 27%
Marketing: 15%
Technical Degrees: 14%

Insights:
Employees with Life Sciences and Medical backgrounds show higher attrition, suggesting possible dissatisfaction or external opportunities in these fields.
Marketing and Technical Degree holders also display notable turnover, which could be linked to competitive job markets or skill demand shifts.
Recommendations:
Consider tailored retention programs for specific educational backgrounds, such as career development for Life Sciences and Medical professionals.
Analyze if job roles align with employees' qualifications and interests.

5. Attrition by Age

Breakdown:
Ages 26-35: 18 employees (highest attrition)
Ages 18-25: 7 employees
Ages 36-45, 46-55, 55+: Lower attrition rates
Analysis:
The 26-35 age group experiences the highest attrition, often due to career changes or family commitments. Younger employees (18-25) also show turnover, potentially due to career exploration.
Lower attrition in older groups (36+) may indicate stable, long-term employees or those closer to retirement.
Recommendations:
Implement career advancement and growth opportunities for employees in the 26-35 age group.
Offer mentorship programs for younger employees to encourage long-term engagement.

6. Attrition by Gender

Data:
Female: 22 employees
Male: 10 employees
Insights:
Female attrition is more than double that of males, potentially indicating challenges like work-life balance, lack of advancement opportunities, or cultural issues.
Recommendations:
Consider flexible work arrangements or support programs for female employees.
Evaluate if there are workplace policies that disproportionately impact women and address these to promote gender equality and satisfaction.

7. Job Satisfaction and Attrition

Breakdown by Job Role:
Job satisfaction scores range from 1 to 4, with dissatisfaction noted in specific roles.
Job roles such as Research Scientist and Laboratory Technician show higher dissatisfaction, correlating with higher attrition.
Analysis:
Low job satisfaction scores in these roles could indicate unmet job expectations, workload issues, or limited career advancement.
Recommendations:
Conduct surveys to gather feedback from employees in low-satisfaction roles.
Develop role-specific interventions, such as workload management or career advancement programs, to boost satisfaction.

8. Attrition by Salary

Data:
Up to 5K: 25 employees (high attrition)
5K-10K: 5 employees
10K-15K: 1 employee
15K+: 1 employee
Insights:
Lower salary brackets have much higher attrition, possibly due to financial dissatisfaction or better-paying opportunities elsewhere.
Recommendations:
Consider revising compensation structures to remain competitive.
Explore non-monetary benefits that can improve employee satisfaction, especially for lower-paid roles.

9. Attrition by Years at Company

Data:

1 Year: Highest attrition (8 employees), followed by employees with longer tenures showing lower attrition rates.

Analysis:

New hires (1 year) are at higher risk of leaving, possibly due to onboarding issues or mismatches in job expectations.

Recommendations:

Enhance onboarding programs to improve engagement and alignment with company culture.

Implement retention strategies targeting employees in their first year to reduce initial turnover.

10. Attrition by Job Role

Key Roles with High Attrition:

Research Scientist: 9 employees

Laboratory Technician: 8 employees

Sales Executive: 4 employees

Insights:

High attrition in roles like Research Scientist and Laboratory Technician suggests potential dissatisfaction with job roles, lack of advancement, or industry competition.

Recommendations:

Conduct exit interviews to understand role-specific challenges.

Provide career development plans for high-risk roles to increase job satisfaction and retention.

11. Department-Specific Analysis

Breakdown by Department:

The dashboard includes filters for departments such as Human Resources, Research & Development, and Sales.

Insights:

Departments like Research & Development may have higher turnover due to role challenges, as seen in high attrition for Research Scientists.

Recommendations:

Tailor retention strategies by department, addressing specific challenges unique to each area.

12. Recommendations

Retention Programs: Create mentorship and career path programs for employees with specific educational backgrounds and age groups.
Salary Adjustments: Review compensation for high attrition salary brackets and align them with market standards.
Flexible Work Options: Implement policies that support work-life balance, particularly for female employees and younger age groups.
Feedback Mechanisms: Regularly collect feedback to monitor job satisfaction across roles and departments, addressing issues proactively.

13. Conclusion

The HR analytics dashboard reveals significant insights into employee attrition patterns, with the highest turnover observed among employees aged 26-35, those in lower salary brackets, and specific job roles like Research Scientists and Laboratory Technicians. Female employees also exhibit higher attrition rates compared to their male counterparts. These findings suggest that turnover may be driven by factors such as career growth opportunities, job satisfaction, and compensation levels.

By focusing on targeted retention strategies—such as competitive salary adjustments, career development programs, flexible work options, and enhanced onboarding for new hires—HR can address the specific needs of high-risk groups. Implementing these data-driven strategies has the potential to improve job satisfaction, foster employee loyalty, and ultimately reduce attrition, contributing to a more stable and engaged workforce.