HR ATTRITION ANALYSIS REPORT (2025)

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INTRODUCTION

Employee attrition is a common issue that many organizations struggle with. When people leave, it disrupts the stability of the workforce, reduces overall productivity, and adds extra costs to the company. To address this problem, it's crucial to figure out the reasons behind why employees choose to leave and use those insights to make smarter decisions.

In this project, we explored HR data to uncover patterns and trends related to attrition. Through data analysis and visualization, we examined factors such as demographics, departments, and job roles. The aim is to provide HR teams with practical insights that can help improve employee retention, support better workforce planning, and create a more positive and sustainable work environment.

PROJECT OBJECTIVE OF HR ANALYTICS

EMPLOYEE ATTRITION DATA VISUALIZATION

This project focuses on analyzing employee attrition using HR data to uncover the key factors that influence why employees leave an organization. The objective is to help HR teams and decision-makers gain a clearer understanding of attrition patterns so they can take meaningful steps to improve employee retention and satisfaction.

Using Power BI as the main visualization tool, this dashboard brings together various employee attributes—such as age, gender, education, salary, department, job role, business travel, and tenure—and shows how these factors relate to employee turnover. The analysis helps identify which groups are more vulnerable to attrition and why.

DATASET OVERVIEW OF HR ANALYTICS PROJECT

The dataset used in this project includes detailed records of 151 employees from a company, with the main goal of understanding why some employees leave. Each row represents one person and includes a mix of personal and job-related details.

You'll find information like age, gender, marital status, as well as education level and field of study—this helps in spotting trends related to an employee's background. On the work side, we have job role, department, salary, travel frequency, and more to explore what's happening within the workplace itself

There are also columns that show monthly income, total work experience, and how long someone has been at the company, which give us a sense of loyalty and satisfaction. Most importantly, there's an "Attrition" column that tells us whether the employee stayed or left.

Out of 151 employees, 12 have left the company, giving an attrition rate of 7.95%. That's not too high, but it's enough to dig deeper and look for patterns. Since the data includes both numbers and categories, it's perfect for building visuals and even trying out predictive models.

The table above displays a sample of employee records used for attrition analysis. It includes key attributes such as age, gender, department, job role, education field, business travel frequency, and monthly income.

The "Attrition" column indicates whether the employee has left the organization. This snapshot help understanding how various demographic and job-related factors may be influencing attrition trends within the company.

| Age	Attrition	BusinessTravel	Department	EducationField	Gender	JobRole	MonthlyIncome
18	Yes	Travel_Rarely	Research & Development	Life Sciences	Male	Laboratory Technician	1420
18	No	Travel_Rarely	Sales	Medical	Female	Sales Representative	1200
18	Yes	Travel_Frequently	Sales	Marketing	Male	Sales Representative	1878
18	No	Non-Travel	Research & Development	Life Sciences	Male	Research Scientist	1051
18	Yes	Non-Travel	Research & Development	Medical	Male	Laboratory Technician	1904
18	No	Non-Travel	Research & Development	Life Sciences	Female	Laboratory Technician	1611
18	Yes	Travel_Frequently	Sales	Medical	Female	Sales Representative	1569
18	No	Non-Travel	Research & Development	Medical	Female	Research Scientist	1514
19	Yes	Travel_Rarely	Sales	Marketing	Male	Sales Representative	1675
19	No	Travel_Rarely	Research & Development	Medical	Female	Laboratory Technician	1483

HR and R&D departments show the highest attrition rates, pointing to possible stress or lack of growth.

Finance sees moderate turnover, suggesting room for improved engagement.IT and Sales have the lowest attrition, indicating stability and satisfaction.

Overall, targeted retention efforts are needed in departments facing high employee loss.

Department-wise Attrition Rate
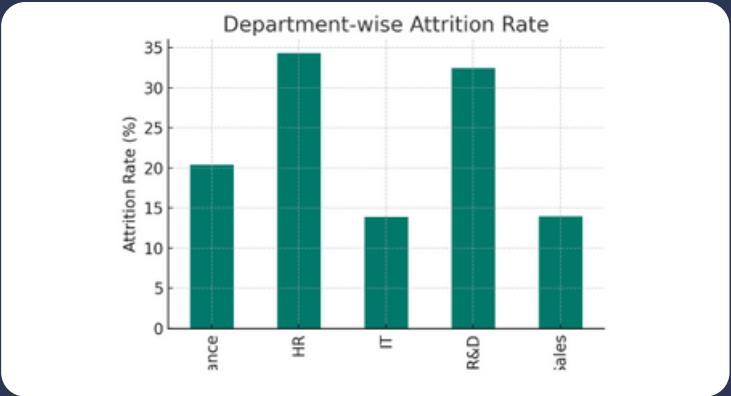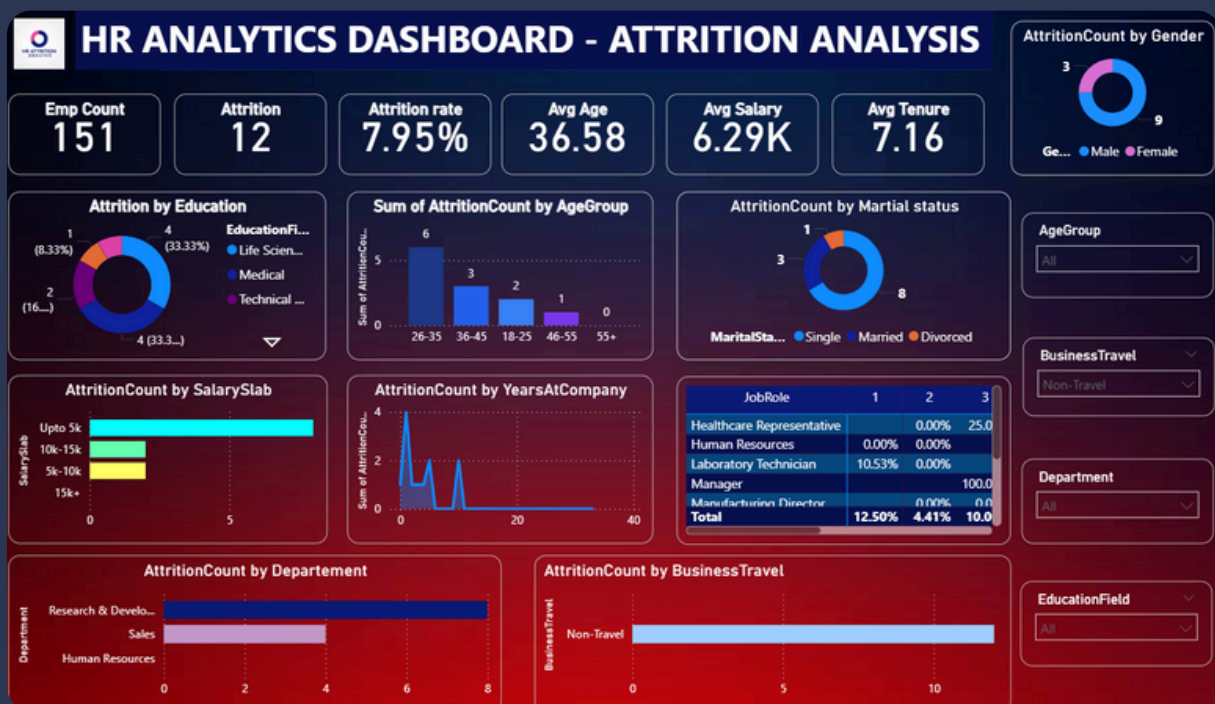
TOOLS & METHODOLOGY

TOOLS:-

This snapshot showcases the Power BI report canvas where all key visuals — such as KPI cards, charts, and slicers — are built. Power BI was the primary tool used to design and analyze the dataset through interactive dashboards.

TOOLS & METHODOLOGY

| EmpID	Age	AgeGroup	Attrition	BusinessTravel	DailyRate	Department	DistanceFromHome	Education
RM297	18	18-25	Yes	Travel_Rarely	230	Research & Development	3	
RM302	18	18-25	No	Travel_Rarely	812	Sales	10	
RM458	18	18-25	Yes	Travel_Frequently	1306	Sales	5	
RM728	18	18-25	No	Non-Travel	287	Research & Development	5	
RM829	18	18-25	Yes	Non-Travel	247	Research & Development	8	
RM973	18	18-25	No	Non-Travel	1124	Research & Development	1	
RM1154	18	18-25	Yes	Travel_Frequently	544	Sales	3	
RM1312	18	18-25	No	Non-Travel	1431	Research & Development	14	
RM128	19	18-25	Yes	Travel_Rarely	528	Sales	22	
RM150	19	18-25	No	Travel_Rarely	1181	Research & Development	3	
RM172	19	18-25	Yes	Travel_Frequently	602	Sales	1	
RM178	19	18-25	Yes	Travel_Rarely	303	Research & Development	2	
RM423	19	18-25	Yes	Travel_Rarely	489	Human Resources	2	
RM689	19	18-25	Yes	Travel_Rarely	419	Sales	21	
RM854	19	18-25	No	Travel_Rarely	645	Research & Development	9	
RM893	19	18-25	Yes	Non-Travel	504	Research & Development	10	
RM910	19	18-25	No	Travel_Rarely	265	Research & Development	25	
RM103	20	18-25	Yes	Travel_Frequently	871	Research & Development	6	
RM488	20	18-25	No	Travel_Rarely	959	Research & Development	1	
RM514	20	18-25	Yes	Travel_Rarely	1362	Research & Development	10	
RM663	20	18-25	Yes	Travel_Rarely	500	Sales	2	
RM690	20	18-25	Yes	Travel_Rarely	129	Research & Development	4	
RM732	20	18-25	Yes	Travel_Rarely	1097	Research & Development	11	
RM777	20	18-25	Yes	Travel_Frequently	769	Sales	9	
RM857	20	18-25	No	Travel_Rarely	805	Research & Development	3	
RM877	20	18-25	No	Travel_Rarely	654	Sales	21	
RM1179	20	18-25	No	Travel_Rarely	1141	Sales	2	

METHODOLOGY:-

The dataset table provides a clear snapshot of employee-level information used in the attrition analysis. It covers essential details such as age, gender, department, education field, job role, and monthly income. These records offer a mix of personal and professional data points that are useful for identifying trends. This structured layout helps uncover patterns behind employee turnover and supports further visual and statistical analysis.

# TOOLS & METHODOLOGY

SLICERS IN METHODOLOGY:

Age Group:

Provides filtering across five age brackets: 18–25, 26–35, 36–45, 46–55, and 55+. This helps in identifying attrition behavior across different career stages.
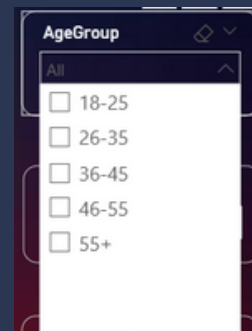
Business Travel :

Allows users to examine the effect of travel frequency on attrition, with categories including Non-Travel, Travel_Frequently, Travel_Rarely, and TravelRarely (a potential data entry inconsistency)
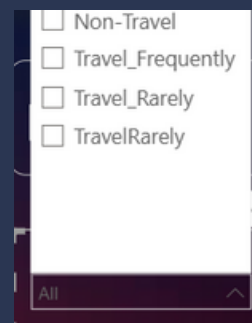
Education Field :

Filters the dataset based on the educational background of employees. Options include:
Human Resources, Life Science, Marketing, Medical, Other, Technical Degree.
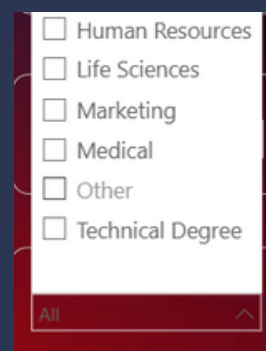
Department :

Enables filtering by organizational department, helping analyze attrition distribution in:

- Human Resources
- Research and Development
- Sales

# KPI's (Key Perfomance Indicators :

The dashboard presents five key performance indicators (KPIs) that offer a concise overview of the workforce. It highlights a total of 151 employees, out of which 12 have left the organization, resulting in an attrition rate of 7.95%. The average age of the employees is 36.58 years, indicating a largely mid-career workforce. Additionally, the average monthly income is shown as ₹62.9K, helping to understand the company's general pay scale. These KPIs collectively provide valuable insights into workforce composition and attrition trends.

| 151 Total Employees | 12 Attrition Count | 7.95% Attrition Rate | 36.58 Avg Age | €2.9K Avg Monthly Income |
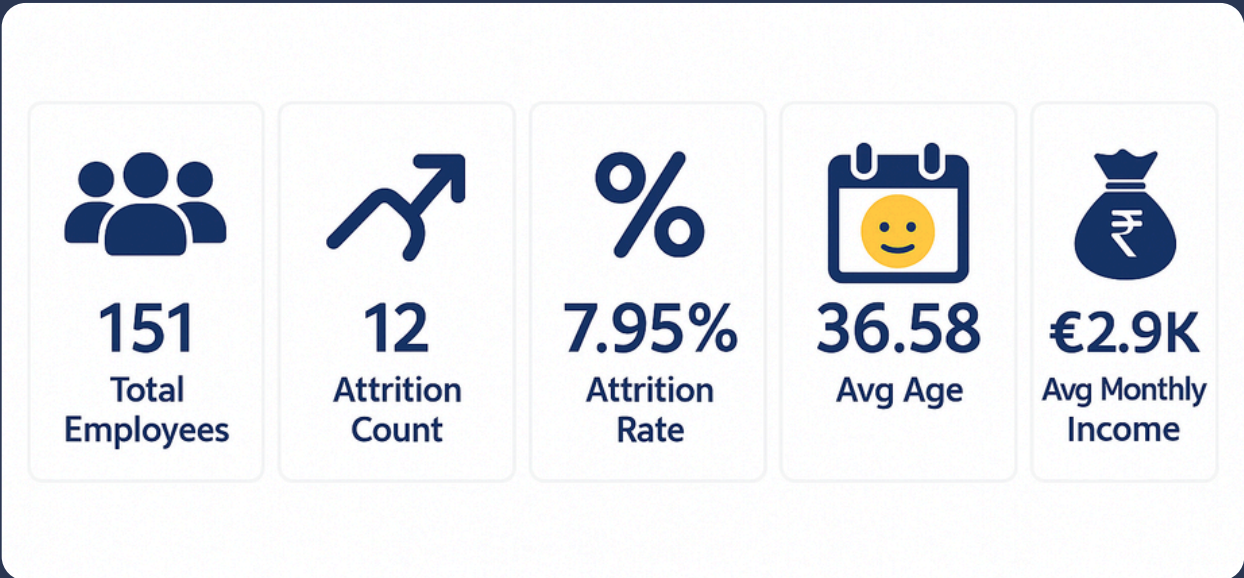
INSIGHTS :-

The highest number of employees leaving the company fall in the 26-35 age group. This shows that younger professionals, especially those in their early to mid-career stages, are more likely to look for new opportunities.

The 18-25 and 36-45 age groups also show some attrition but at a lower level. On the other hand, employees aged 46 and above, especially 55+, show very low attrition. This indicates that older employees are generally more stable and likely to stay longer in the organization.
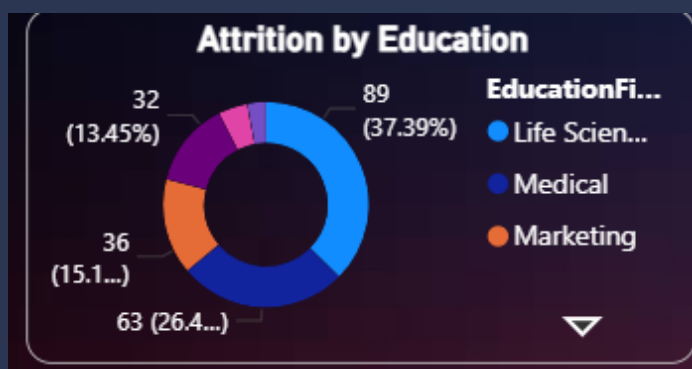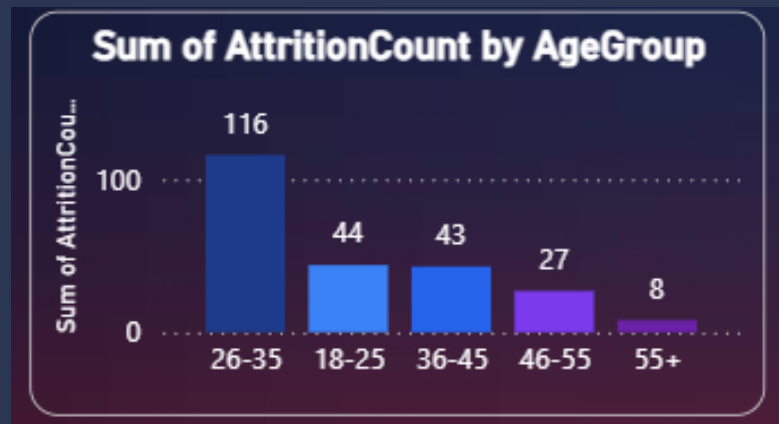

The highest attrition is seen among employees with Life Sciences and Technical education backgrounds. This could be due to more external job opportunities or a mismatch between their skills and current roles.

On the other hand, fields like Medical and Others show much lower attrition, suggesting better job fit or satisfaction in those areas.

INSIGHTS :-

Single employees account for the largest portion of attrition, followed by married and divorced employees.

This suggests that single employees might be more open to exploring new opportunities or relocating, whereas married and divorced individuals may prefer job security and stability, especially if they have family responsibilities.
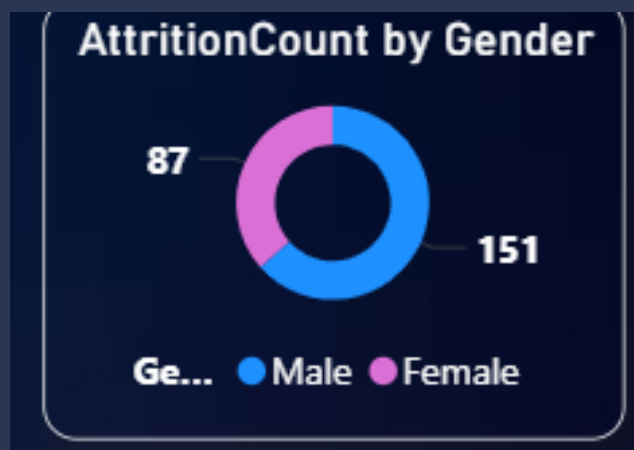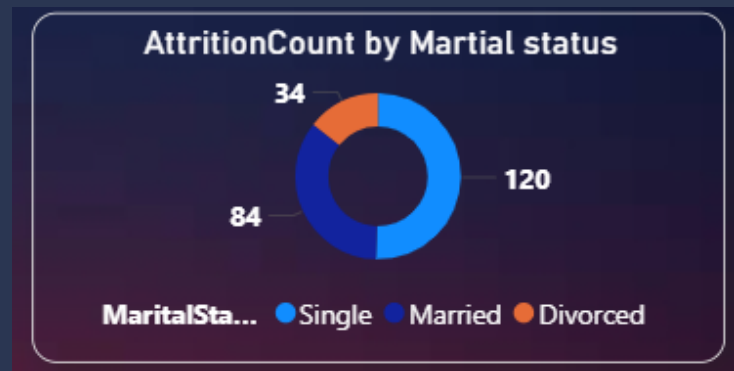
Attrition is higher among male employees (151) compared to female employees (87).

This could be due to different job roles, career goals, or workplace experiences.

It may also indicate that men in the company are more likely to switch jobs, while female employees may show slightly more consistency or satisfaction in their roles.

INSIGHTS :-

Most employees leaving the company are from the lowest salary range – up to ₹5K. Attrition decreases as salary increases.

Very few employees in the ₹15K+ range have left. This shows a clear connection between salary and retention.

Employees with lower pay are more likely to leave, possibly looking for better financial opportunities, while higher-paid employees tend to stay longer.
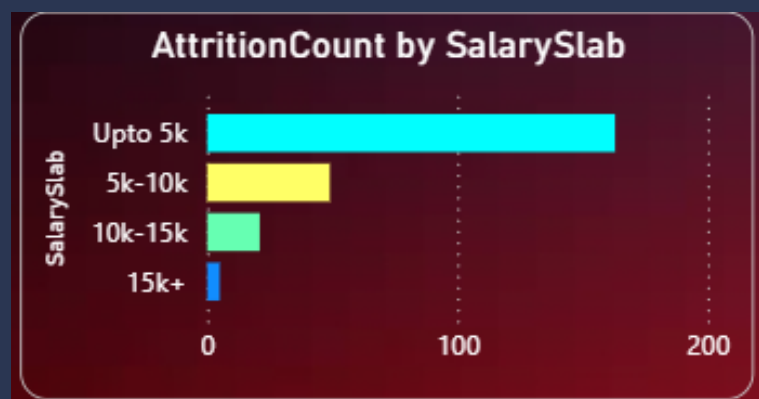
Employees who travel rarely have the highest attrition rate. This might seem unexpected, but it suggests that occasional travel could be more stressful or less rewarding.

Employees who travel frequently also show some attrition, but it's lower than those who travel rarely. The lowest attrition is seen in employees who don't travel at all, which might mean they have a more balanced and predictable work schedule.

KEY FINDINGS :-

This analysis highlights key patterns behind employee attrition using insights from Power BI.

Age Group:
 Employees aged 26–35 have the highest attrition, followed by 18–25. Younger professionals may be more likely to explore better career or salary opportunities. In contrast, older age groups (especially 45+) show higher stability.

Department-wise Trends:
 The R&D and Sales departments face the most attrition, possibly due to high work pressure or limited growth. HR shows the least, indicating higher satisfaction.

Salary Impact:
 Attrition is highest among employees earning below ₹5,000. As salary increases, attrition drops. This suggests salary plays a big role in retention.

Business Travel:
 Employees who travel rarely tend to leave more than those who travel often or not at all, possibly due to inconsistency or poor work-life balance.

Demographics:
 Male and single employees show higher attrition compared to females and married employees. Lifestyle flexibility and external opportunities may influence this trend.

Education:
 Attrition is higher among employees with Life Sciences and Technical education. These skills may be in higher demand elsewhere or underutilized in current roles.

The analysis reveals that young, low-paid, single male employees from technical or R&D backgrounds are most likely to leave. These patterns can help the organization develop targeted strategies to improve employee engagement, review salary structures, and enhance retention across key departments.

RECOMMENDATIONS :-

Based on the key findings, the following actions are suggested to reduce attrition and improve employee satisfaction:

Focus on 26–35 Age Group:
This group has the highest attrition. Offer career growth plans, training, and promotion opportunities to keep them engaged.

Support R&D and Sales Teams:
These departments show high attrition. Improve workload management, provide regular feedback, and encourage open communication to reduce pressure.

Improve Pay for Low Salary Brackets:
Many employees earning below ₹5,000 are leaving. Reviewing and increasing entry-level pay can help reduce turnover.

Handle Travel-Related Concerns:
Employees who travel rarely face higher attrition. Offer flexibility and support to improve their work-life balance.

Engage Single and Male Employees:
Create engagement programs, flexible work options, and social events to improve retention among these groups.

Use Education-Based Talent Wisely:
Employees with Life Sciences and Technical backgrounds are leaving more. Match them with roles that use their skills and offer learning opportunities.

These steps can help the company reduce attrition, retain skilled employees, and build a more stable workforce.By focusing on targeted employee needs and improving workplace conditions, the organization can boost overall satisfaction and productivity.

Implementing these strategies will not only lower hiring costs but also support long-term growth and team morale

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