

# HR ANALYTICS POWER BI PROJECT

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# Project objective

Employee attrition is a critical challenge faced by many organizations, leading to increased recruitment costs, loss of talent, and disruptions in productivity. This project aims to analyze attrition trends across different departments, roles, salary levels, and demographics to identify key factors contributing to high turnover rates. Using interactive dashboards and data visualization tools, this project seeks to uncover patterns and insights related to attrition based on employee tenure, job roles, education, age, and salary. The goal is to provide data-driven recommendations to the HR and management teams to improve employee retention strategies, optimize workforce planning, and reduce attrition rates in the organization.

# HR ANALYTICS DASHBOARD

Human Resources

Research & Development

Sales

Attrition by Gender

Female

Male

Count Of Employee

63

Attrition

12

Attrition Rate

19.0%

Avg Age

37.81

Avg Salary

6.65K

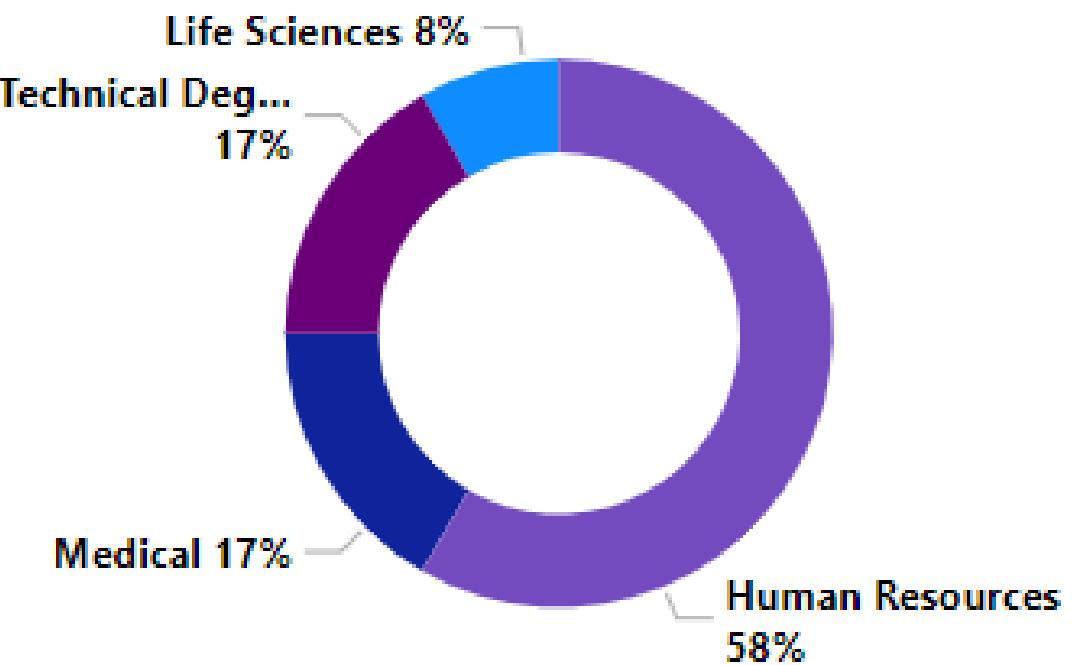
Avg Years

7.24

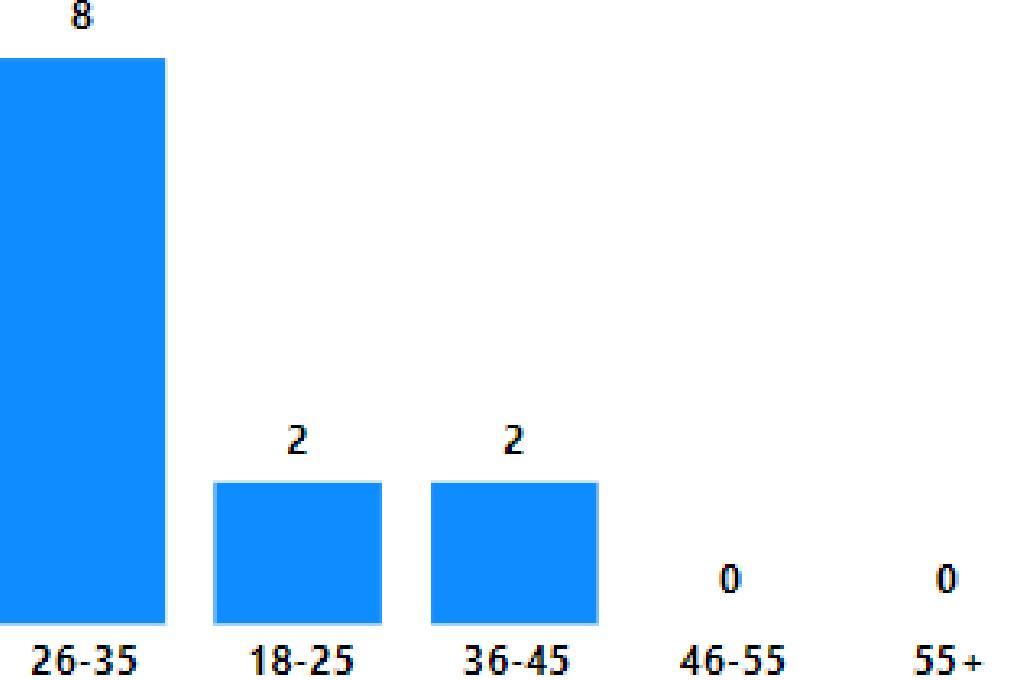
6

5

Attrition by Education



Attrition by Age



JobRole

1 2 3 4 Total

Human Resources

5 2 3 2 12

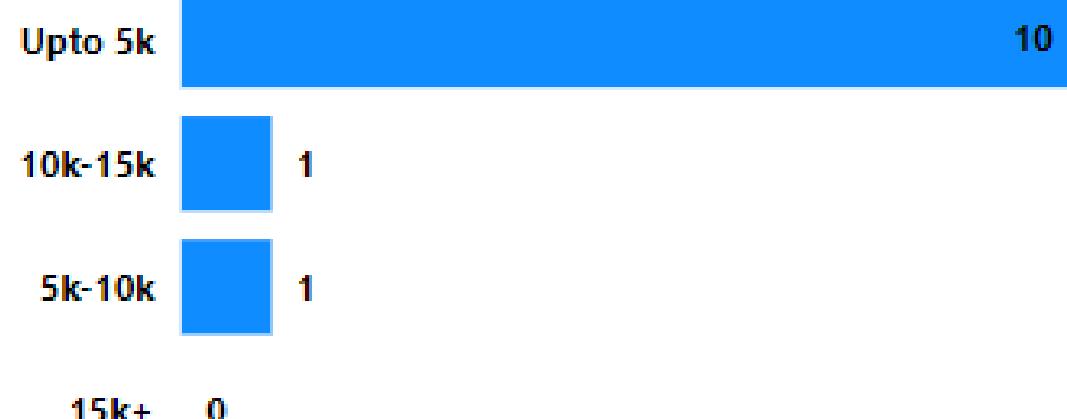
Manager

0 0 0 0 0

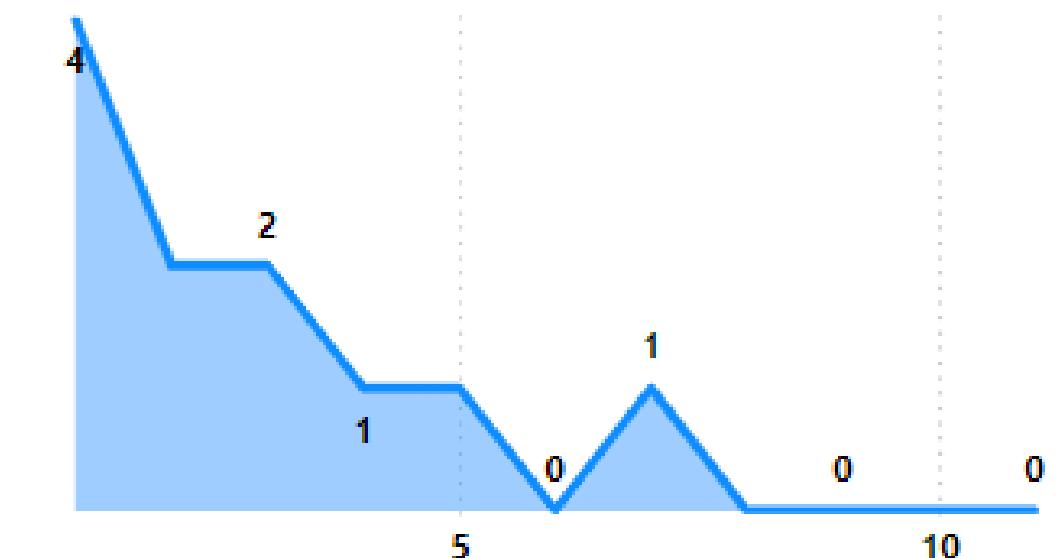
Total

5 2 3 2 12

Attrition by Salary



Attrition by Years At Company



Attrition by JobRole



# HR ANALYTICS DASHBOARD

Human Resources

Research & Development

Sales

Attrition by Gender

Male

Female

Count Of Employee

961

Attrition

133

Attrition Rate

13.8%

Avg Age

37.04

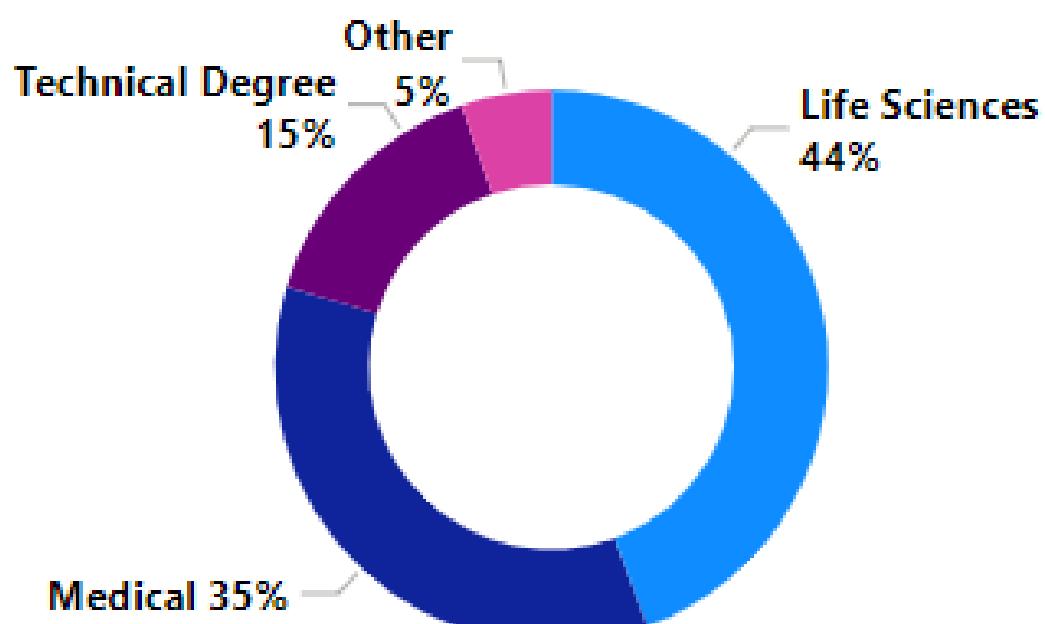
Avg Salary

6.28K

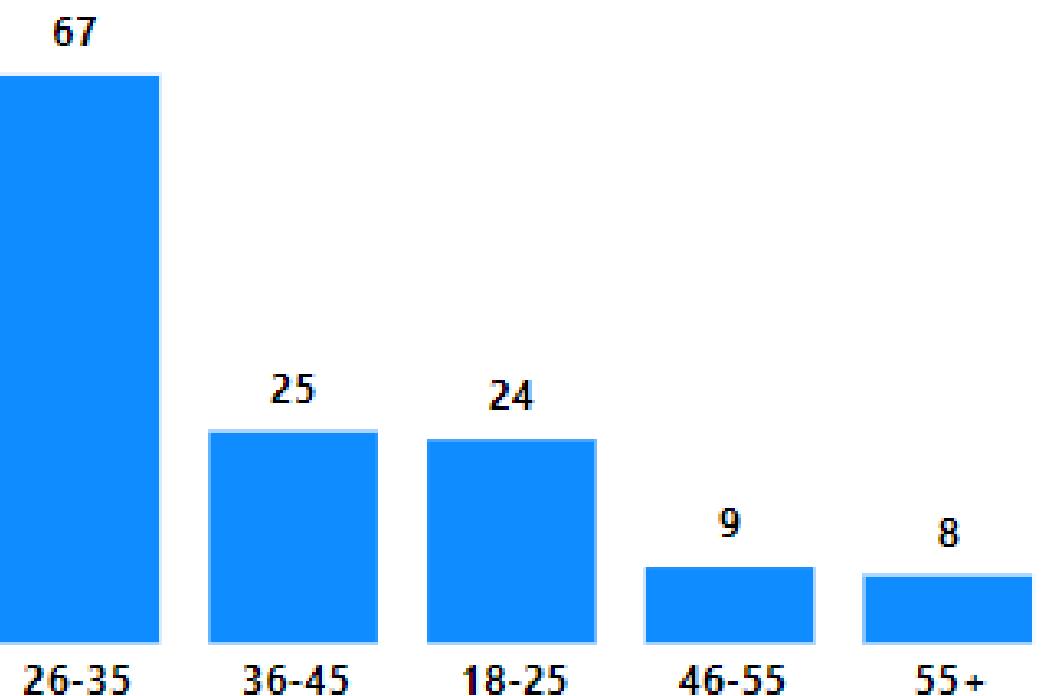
Avg Years

6.86

Attrition by Education



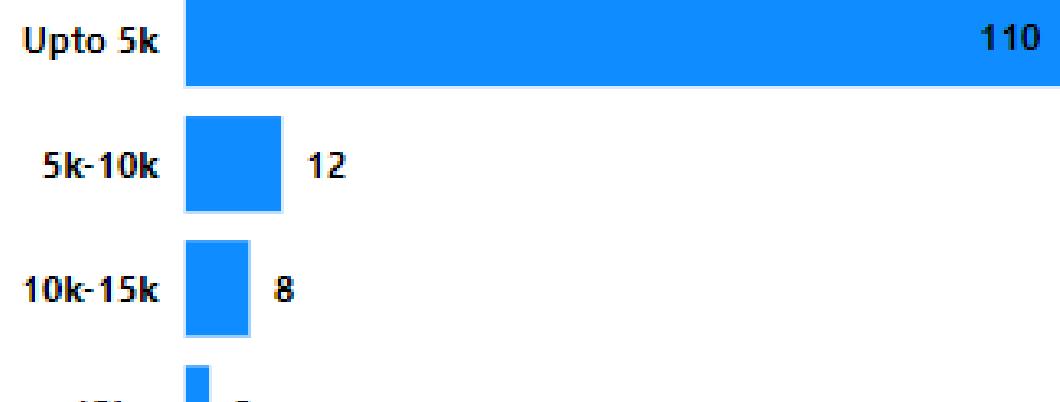
Attrition by Age



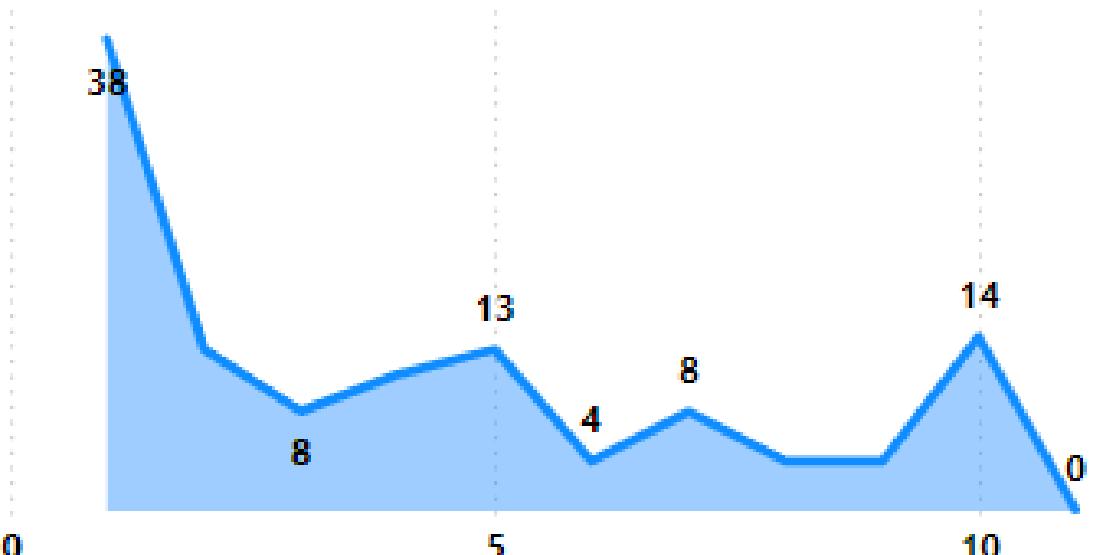
JobRole

JobRole	1	2	3	4	Total
Healthcare Representative	2	2	1	4	9
Laboratory Technician	20	8	21	13	62
Manager	1	1	1	0	3
Manufacturing Director	2	2	4	2	10
Research Director	0	1	1	0	2
Research Scientist	13	10	15	9	47
<b>Total</b>	<b>38</b>	<b>24</b>	<b>43</b>	<b>28</b>	<b>133</b>

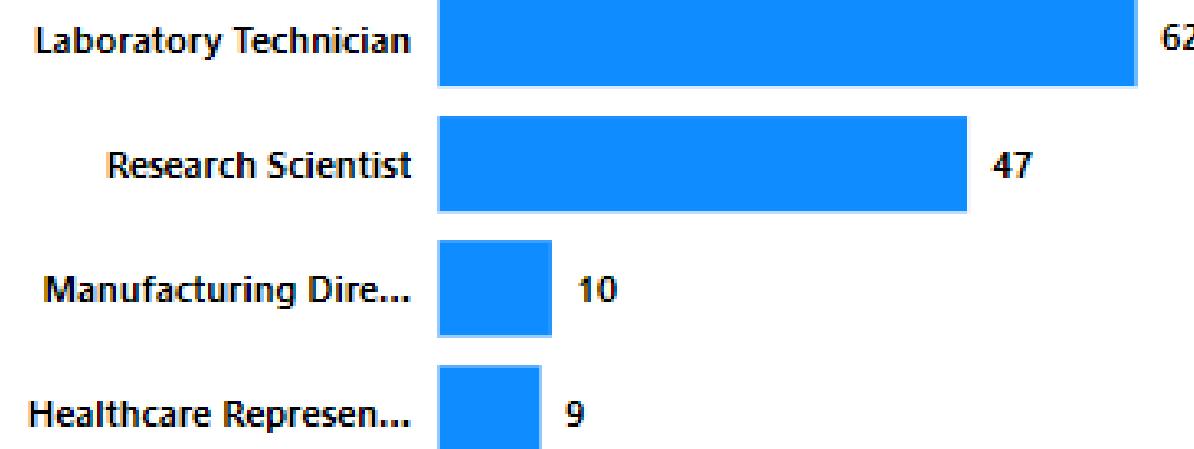
Attrition by Salary



Attrition by Years At Company



Attrition by JobRole



# HR ANALYTICS DASHBOARD

Human Resources

Research & Development

Sales

Attrition by Gender

Male

Female

Count Of Employee

446

Attrition

92

Attrition Rate

20.6%

Avg Age

36.54

Avg Salary

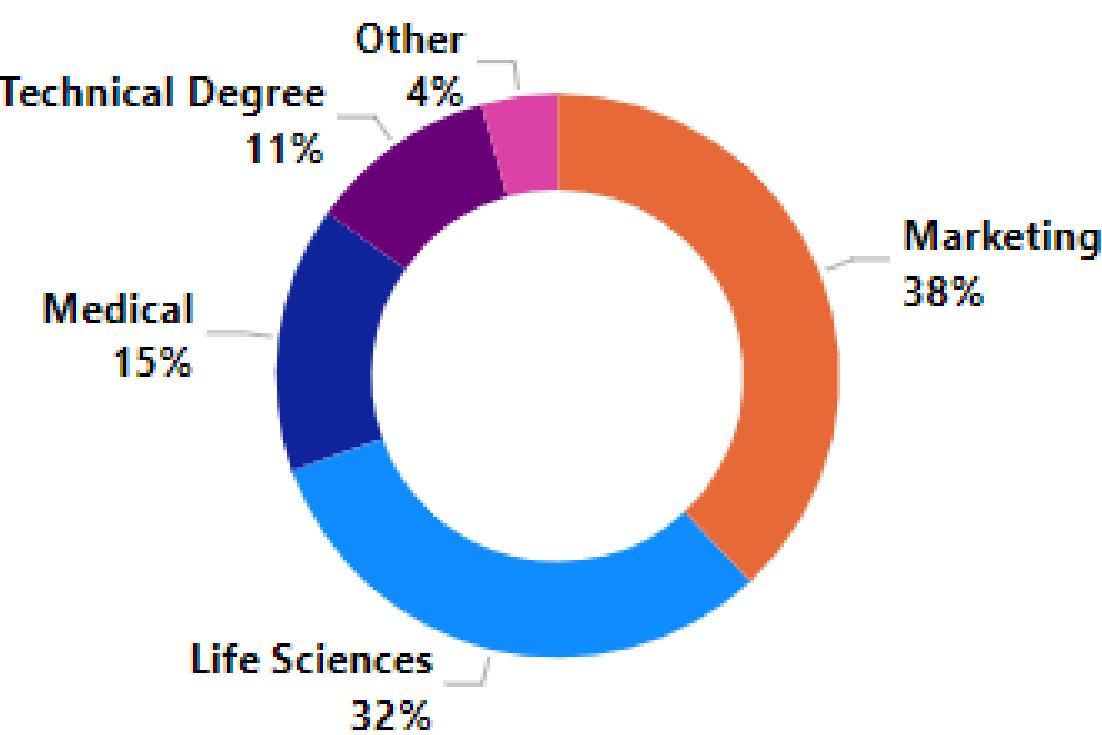
6.96K

Avg Years

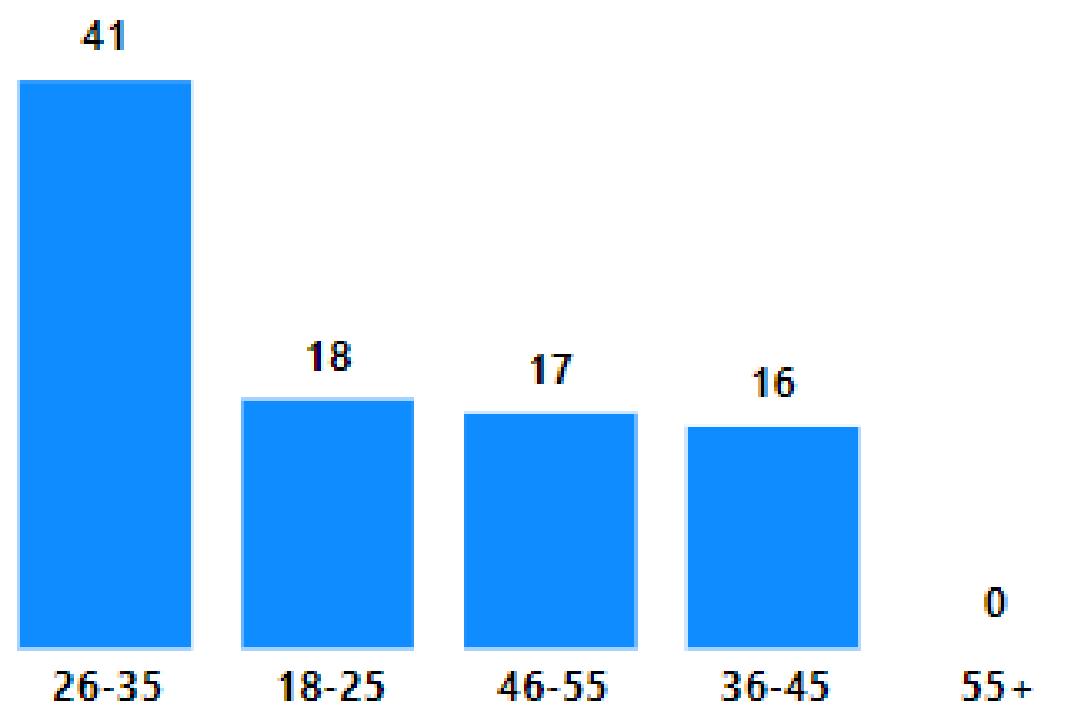
7.28



Attrition by Education



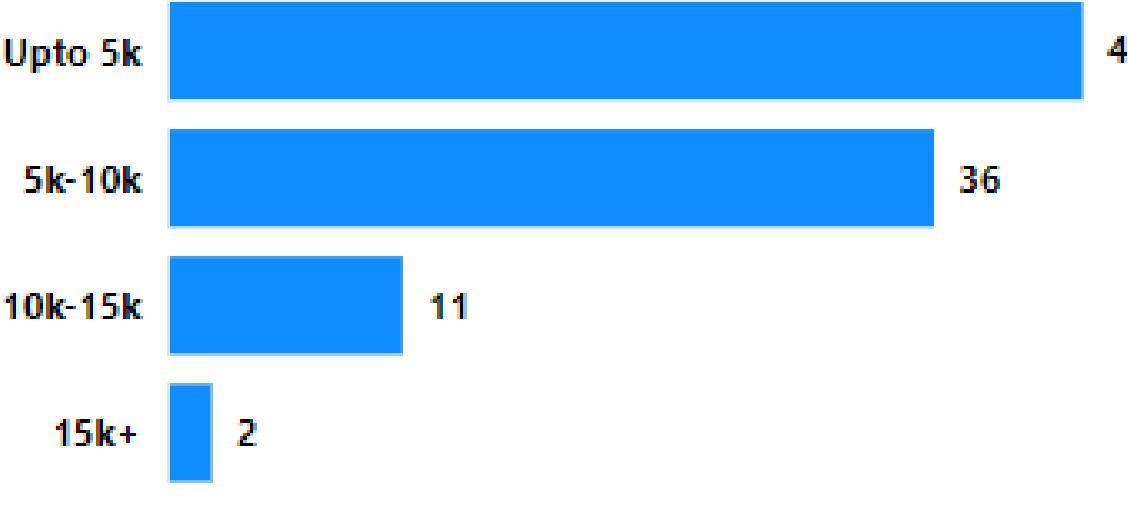
Attrition by Age



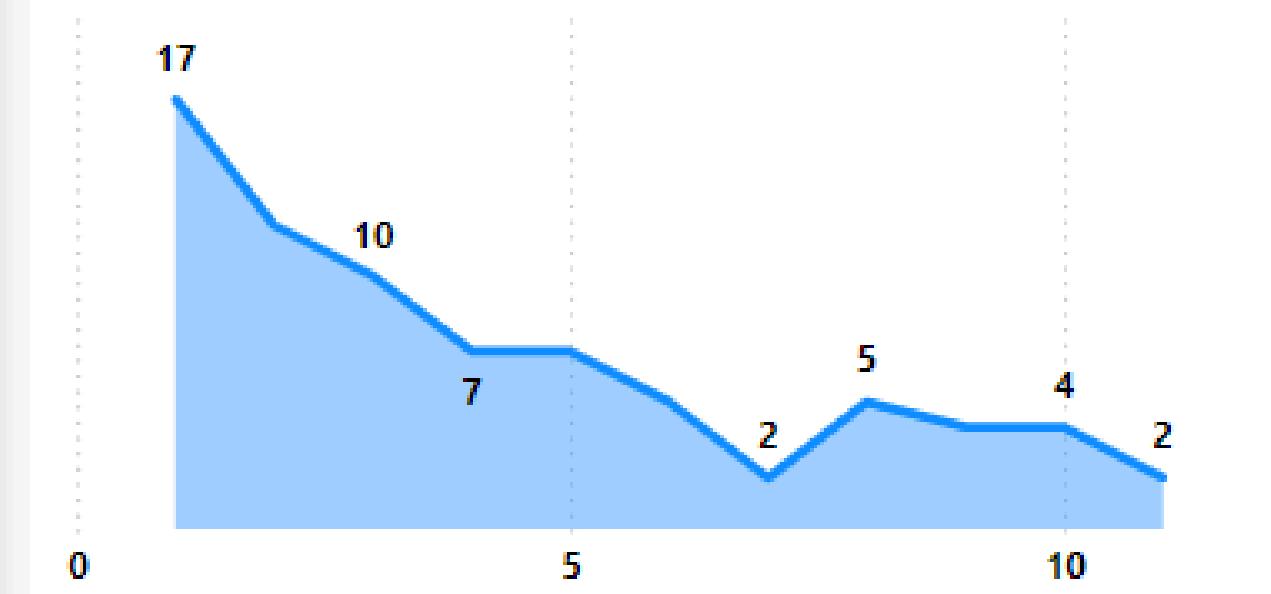
JobRole

JobRole	1	2	3	4	Total
Manager	0	1	0	1	2
Sales Executive	16	9	18	14	57
Sales Representative	7	10	9	7	33
<b>Total</b>	<b>23</b>	<b>20</b>	<b>27</b>	<b>22</b>	<b>92</b>

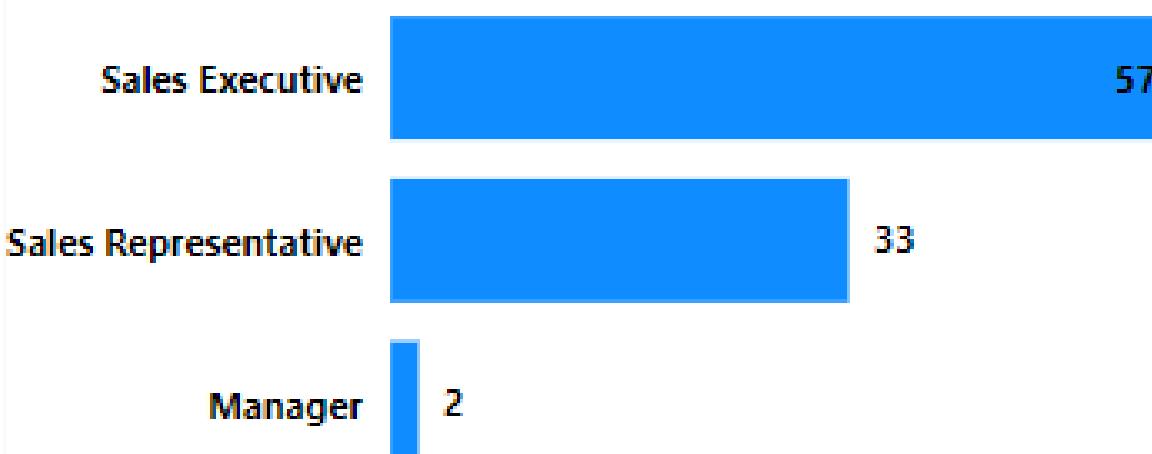
Attrition by Salary



Attrition by Years At Company



Attrition by JobRole



# Insights

- Attrition Rate: The highest attrition rate is observed in the Sales department (20.6%), followed by Human Resources (19%), and then Research & Development (13.8%).
- Age Factor: In all three departments, employees aged 26-35 have the highest attrition, indicating that this age group might be more prone to job changes or dissatisfaction.
- Education: Employees with a background in Human Resources and Life Sciences are the most affected by attrition across departments, implying possible job-related factors tied to these fields.

# Department-Specific Insights:

## Human Resources:

- Attrition is dominated by Human Resources roles, especially those earning less than 5k in salary, showing a trend where lower-salaried employees are more likely to leave
- 58% of the employees leaving have a Human Resources background.

## Research & Development:

- Laboratory Technicians show the highest attrition at 62 out of 133 employees, indicating potential dissatisfaction within this job role.
- Research Scientists also see significant attrition (47 employees), possibly suggesting issues related to work conditions or growth opportunities.

## Sales:

- The Sales Executive role suffers the most attrition, with 57 employees leaving, followed by Sales Representatives (33 employees). This shows that sales roles, particularly higher-level ones, may have issues with retention, possibly due to performance pressures or incentives.
- The high attrition rate of 20.6% in Sales suggests significant challenges in maintaining workforce stability.

# Gender Disparity in Attrition

## Human Resources:

- The gender split shows relatively balanced attrition between males and females (6 females and 5 males).

## Research & Development:

- The majority of employees leaving are male (80 males versus 37 females), indicating potential gender-related workplace dynamics that may influence retention.

## Sales:

- Male employees also dominate attrition numbers here (43 males versus 32 females), possibly reflecting the male-dominated nature of sales roles.

## Tenure and Salary Implications:

- Across departments, most employees leave within the first few years of employment (less than 5 years). This trend suggests that tenure plays a significant role in attrition, and organizations might need to focus on improving engagement or incentives for newer employees.
- The majority of those who leave earn less than 5k, suggesting that salary is a critical factor driving employee decisions to leave.

## Job Role Impacts:

In all departments, specific roles such as Human Resources, Laboratory Technicians, and Sales Executives see higher attrition rates. This suggests that these roles might have higher job demands, stress, or fewer opportunities for advancement, leading to more turnover.

# Conclusion

The dashboards indicate that job roles, salary levels, and tenure are critical factors influencing attrition. Departments like Sales and Research & Development, particularly for specific roles, may benefit from improved retention strategies, such as better salary structures, career development programs, and enhanced working conditions to reduce turnover. Additionally, companies should pay attention to the age groups and educational backgrounds most affected by attrition to address underlying issues more effectively.

# Recommendations

- Salary Adjustments: For roles with higher attrition, especially in Sales and Research & Development, organizations should consider revising their salary structures to ensure they are competitive in the market. Offering performance-based bonuses and salary increments could help retain employees.
- Professional Growth Opportunities: Implement career development initiatives such as training programs, mentorship, and leadership development, particularly for roles with high turnover. Providing clear career progression paths could incentivize employees to stay longer.
- Offer opportunities for continuing education or certification programs to employees from educational backgrounds that are prone to higher attrition.
- Flexible Work Options: Introduce flexible working hours or remote work opportunities to enhance employee satisfaction, particularly for those in high-stress roles or for employees within the age group most affected by attrition (e.g., 26–35).
- Work Environment Improvement: Consider conducting surveys or focus groups to identify specific working conditions that employees find challenging. Address those issues through better workplace facilities, support resources, or policy changes.

**THANK YOU**