HR Analytics Report

Table of Contents

Introduction

This report provides a comprehensive analysis of the HR Analytics Dashboard, offering insights into key metrics, trends, and areas for improvement. The dashboard presents data on employee demographics, satisfaction, performance, and attrition rates, enabling informed decision-making and strategic planning.

The report is divided into two sections, each focusing on a specific set of metrics and visualizations:

- This dashboard provides insights into employee demographics, attrition rates, salary, information satisfaction, performance, and engagement metrics.

By analyzing the data presented in these dashboards, we can identify areas where the organization can improve employee satisfaction, performance, and retention. The recommendations provided in this report are based on the findings from the analysis and aim to help the organization achieve its HR objectives.

Background

This report aims to analyze the various aspects of employee satisfaction, retention, and performance within an organization. By examining data on employee demographics, job roles, salaries, attrition rates, training participation, and other relevant factors, we can gain valuable insights into the strengths and weaknesses of the organization's current practices and identify areas for improvement.

The data analyzed in this report was collected through [mention data collection methods, such as employee surveys, HR records, performance reviews, etc.]. This information provides a comprehensive overview of the workforce and enables us to draw meaningful conclusions about employee satisfaction, engagement, and retention.

HR Analytics Report

Questions

What are the overall satisfaction levels?

How can we effectively monitor and enhance our recruitment and retention strategies to ensure a satisfied and engaged workforce?

What is the average salary by job role?

Which departments have the highest attrition rates?

What is the relationship between salary range and attrition rate?

How many employees are in each age group?

What is the relationship between years since last promotion and attrition rate?

What influences Salary Range?

Which Job Roles have the most significant impact on increasing the likelihood of a salary range between 100k and 200k, and by how much?

What is the top 5 department benefiting from training opportunities?

HR Analytics Report

What are the overall satisfaction levels?

JobRole	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied	Total
Environment Satisfaction						
Software Engineer	5	8	85	74	83	255
Senior Software Engineer	4	2	39	34	35	114
Sales Representative	1		26	16	29	72
Sales Executive	6	4	88	79	104	281
Recruiter		1	7	7	6	21
Manager			10	15	7	32
Machine Learning Engineer	3	5	40	44	30	122
HR Manager			2		1	3
HR Executive	2	2	5	6	9	24
HR Business Partner		1	2	2		5
Engineering Manager	2	1	23	22	22	70
Data Scientist	8	1	79	67	79	234
Analytics Manager		2	18	15	12	47
Total	31	27	424	381	417	1280

1. Overall Satisfaction Levels:

- Out of a total of **1280 responses**, **381 (30%) employees** are **Satisfied**, and **417 (32%) are Very Satisfied**, indicating that more than **60%** of the employees have a **positive perception** of their work environment.
- However, there are **424 (33%) employees** who are **Neutral**, and **58 employees** who are **Dissatisfied or Very Dissatisfied** (combined 5%). While dissatisfaction levels are low, the high neutral percentage might indicate room for improvement.

2. Job Roles with High Satisfaction:

- **Software Engineers**: Out of **255 responses**, a majority (**74 Satisfied, 83 Very Satisfied**) show positive satisfaction, with only **13 employees dissatisfied**.
- **Data Scientists**: With **234 responses**, **79 are Very Satisfied**, **67 are Satisfied**, and only a small number (**8**) are **Dissatisfied**.
- **Analytics Managers**: Small sample size of **73**, but the majority are **Very Satisfied (32)** or **Satisfied (18)**.

## 3. Roles with High Dissatisfaction or Neutral Sentiment:

- **Sales Representatives**: Out of **72 responses**, only **4 are Satisfied**, and **79 are Neutral**, with **6 Dissatisfied or Very Dissatisfied**. This indicates a significant issue in this department, where employees are neither very engaged nor satisfied with their work environment.
- **Recruiters**: With only **32 responses**, the neutral score is relatively high (**10 Neutral**), and **12 employees are Dissatisfied**.
- **HR Executives**: Out of **9 responses**, most are **Neutral (6)**, and the rest are **Dissatisfied**, highlighting dissatisfaction within the HR executive team.

4. Neutral Responses:

The high number of **Neutral responses** in job roles such as **Sales Executive, HR Manager, HR Executive**, and **Recruiter** suggests that employees in these roles may feel indifferent about the work environment. This could imply a need for further investigation, as neutral responses might point to disengagement or lack of strong feelings either way.

HR Analytics Report

How can we effectively monitor and enhance our recruitment and retention strategies to ensure a satisfied and engaged workforce?
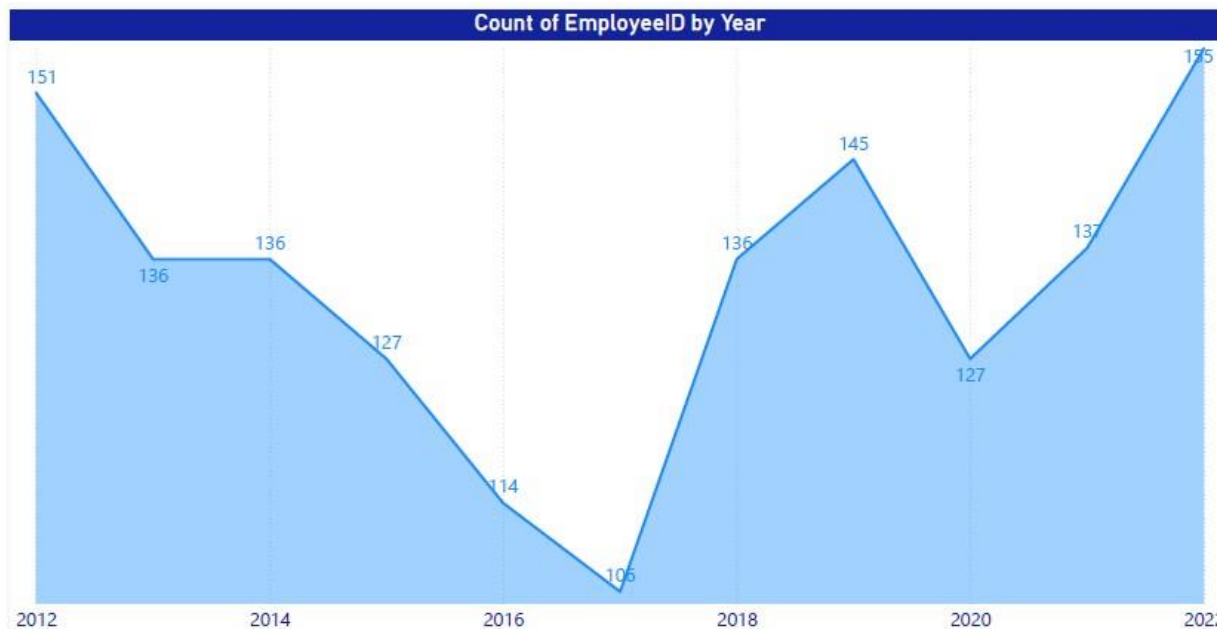
1. Initial High (2012-2013):
   o In **2012**, the count of employees starts at **151**, and slightly decreases to **136** in **2013**. The drop is minimal, suggesting a stable workforce in these initial years.
2. Decline Period (2013-2016):
   o From **2013 to 2016**, there is a sharp decline in employee count. By **2016**, the number of employees drops to the lowest point in the graph, with **106** employees.
   o This significant reduction in employees might indicate layoffs, downsizing, or a high turnover rate, which could be due to various factors such as economic challenges, restructuring, or organizational changes.
3. Recovery and Growth (2016-2018):
   o From **2016 to 2018**, there is a recovery, with the employee count increasing to **136** by **2018**. This rise could suggest that the company made efforts to hire new employees, stabilize after the prior dip, or improve its internal conditions.
4. Fluctuations (2018-2022):
   o After peaking at **145** in **2019**, the employee count drops again to **127** in **2020**, indicating some volatility in retention or hiring. However, there is a strong recovery after that, with the count increasing steadily to **137** in **2021** and peaking at **175** by **2022**.
   o The increase from **2020 to 2022** could indicate positive changes in business strategy, successful hiring practices, or better retention policies.

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What is the average salary by job role?
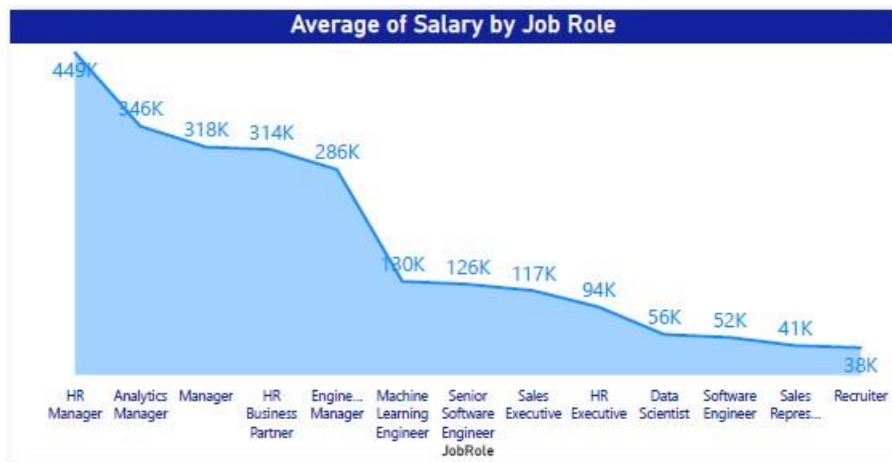
The provided graph illustrates the average salaries for various job roles within an organization. Based on the data, we can observe the following key trends:

1. Highest-Paying Roles:
   - **Managerial Positions:** Roles such as "HR Manager," "Analytics Manager," and "Business Partner" consistently command the highest salaries, suggesting a strong correlation between managerial responsibilities and compensation.
   - **Specialized Technical Roles:** "Machine Learning Engineer" and "Software Engineer" also rank among the top earners, reflecting the high demand for technical skills in the current job market.
2. Salary Disparity:
   - A significant salary gap exists between the highest-paying roles and lower-level positions like "Recruiter" and "Sales Representative." This disparity highlights potential inequities in compensation structures.
3. HR Roles:
   - While "HR Manager" is among the highest-paid roles, other HR positions, such as "HR Executive" and "HR Data Scientist," exhibit lower salaries. This might indicate a need for reevaluating compensation structures within the HR department to ensure equity and attract top talent.

HR Analytics Report

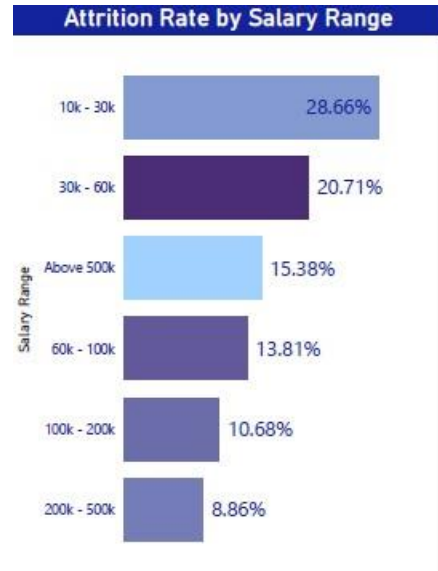**Which departments have the highest attrition rates?**
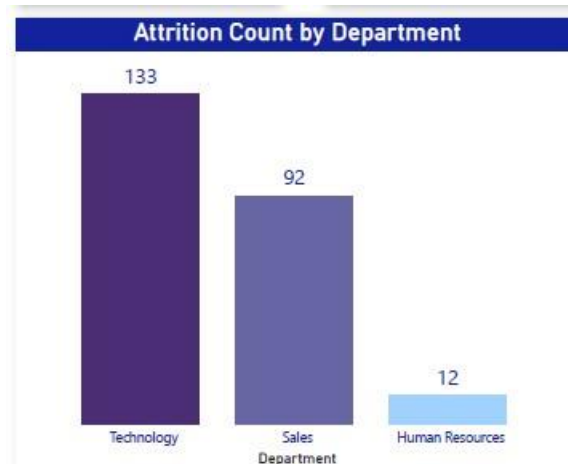
The provided bar chart illustrates the number of employee attritions in three departments: Technology, Sales, and Human Resources. Based on the data, we can observe the following:

1. Highest Attrition: The Technology department experiences the highest attrition rate, with 133 employees leaving.
2. Moderate Attrition: The Sales department has a moderate attrition rate of 92 employees.
3. Lowest Attrition: The Human Resources department has the lowest attrition rate, with only 12 employees leaving.

HR Analytics Report

What is the relationship between salary range and attrition rate?

Attrition Rate by Salary Range

| Salary Range	Attrition Rate
10k - 30k	28.66%
30k - 60k	20.71%
Above 500k	15.38%
60k - 100k	13.81%
100k - 200k	10.68%
200k - 500k	8.86%

The provided bar chart illustrates the attrition rates for employees across different salary ranges. Based on the data, we can observe the following:

1. Highest Attrition: The lowest salary range (10k - 30k) has the highest attrition rate at 28.66%.
2. Decreasing Attrition: As the salary range increases, the attrition rate generally decreases. The highest salary range (above 500k) has the lowest attrition rate at 8.86%.

HR Analytics Report

**How many employees are in each age group?**
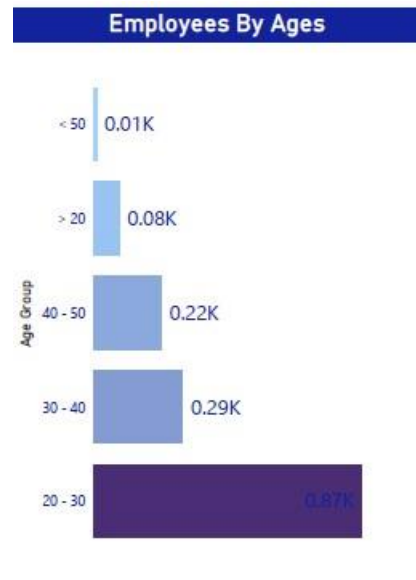
The provided bar chart illustrates the distribution of employees across different age groups within an organization. Based on the data, we can observe the following:

1. Largest Age Group: The 20-30 age group represents the largest segment of the workforce, with 0.87K employees.
2. Smaller Age Groups: The remaining age groups, including <50, >20, 30-40, and 40-50, have significantly smaller employee populations.
3. Age Diversity: The organization exhibits a relatively diverse age distribution, with employees ranging from younger than 20 to over 50 years old.

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**What is the relationship between years since last promotion and attrition rate?**
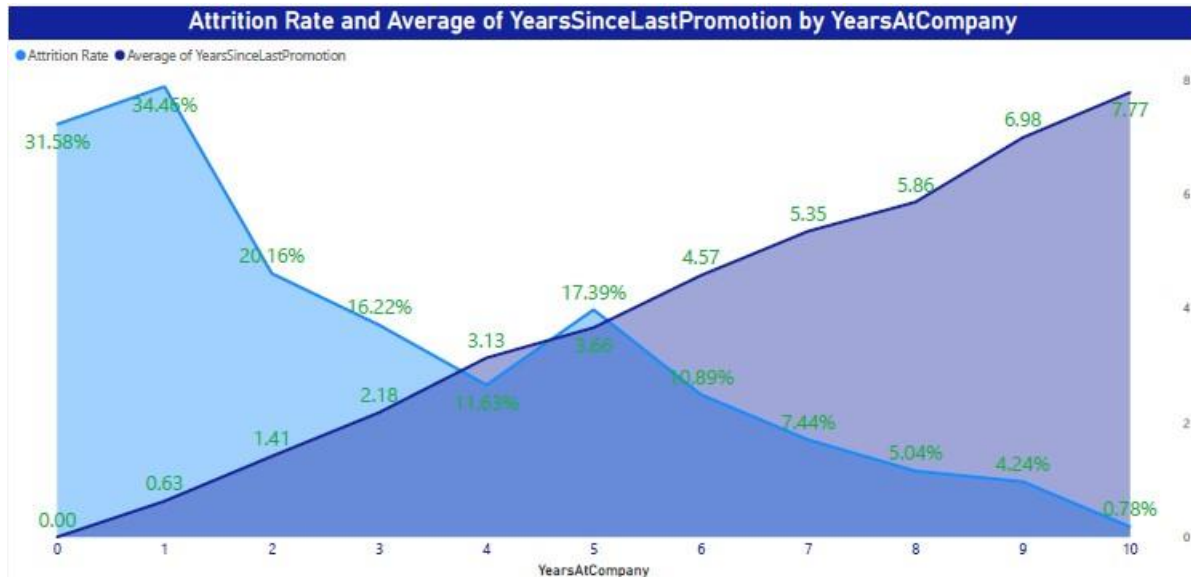
The provided line chart illustrates the relationship between attrition rate and the average number of years since the last promotion for employees across different tenure levels (Years at Company). Based on the data, we can observe the following:

1. Inverse Relationship: There is a general inverse relationship between attrition rate and average years since last promotion. As the average years since last promotion increase, the attrition rate tends to decrease.
2. Peak Attrition: The highest attrition rates occur among employees with relatively short tenures (1-3 years at the company).
3. Promotion Impact: The data suggests that promotions can positively impact employee retention. Employees who have been promoted recently are less likely to leave the organization.

HR Analytics Report
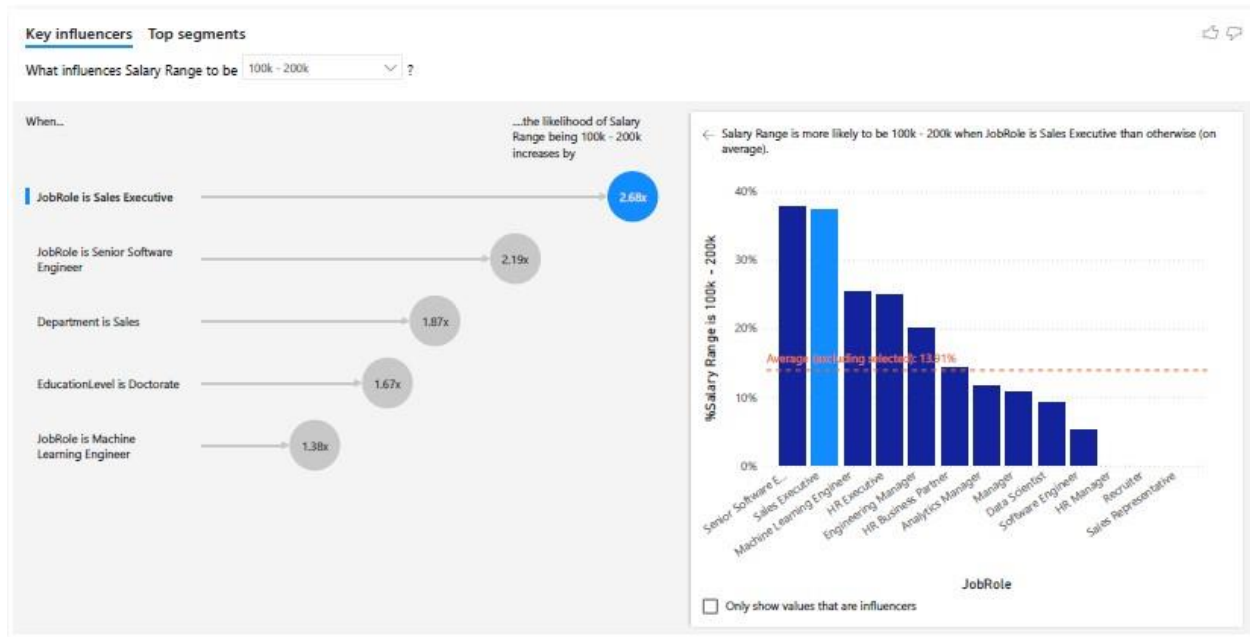
What influences Salary Range?
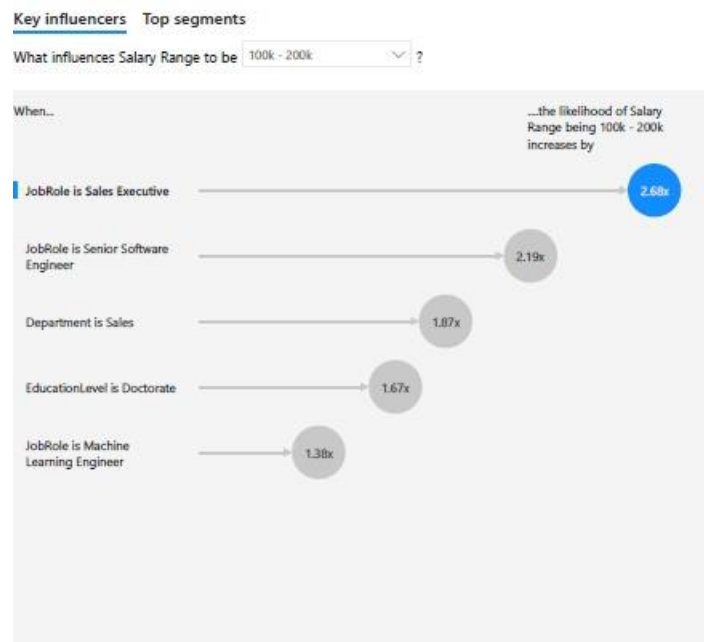
The provided treemap illustrates the key factors that influence an employee's salary range to fall within the 100k-200k bracket. The size of each segment represents the relative impact of that factor on the likelihood of a salary in this range.

1. **Job Role:** The most significant influencer is "JobRole," with "Sales Executive" having the strongest impact, followed by "Senior Software Engineer."
2. **Department:** The "Department" of "Sales" also plays a substantial role in determining salary range.
3. **Education Level:** "EducationLevel" with a "Doctorate" degree is another influential factor.
4. **Job Role:** "Machine Learning Engineer" also has a moderate impact on salary range.

HR Analytics Report

Which Job Roles have the most significant impact on increasing the likelihood of a salary range between 100k and 200k, and by how much?

The provided visualization includes a treemap and a bar chart, both illustrating the key factors that influence an employee's salary range to fall within the 100k-200k bracket.
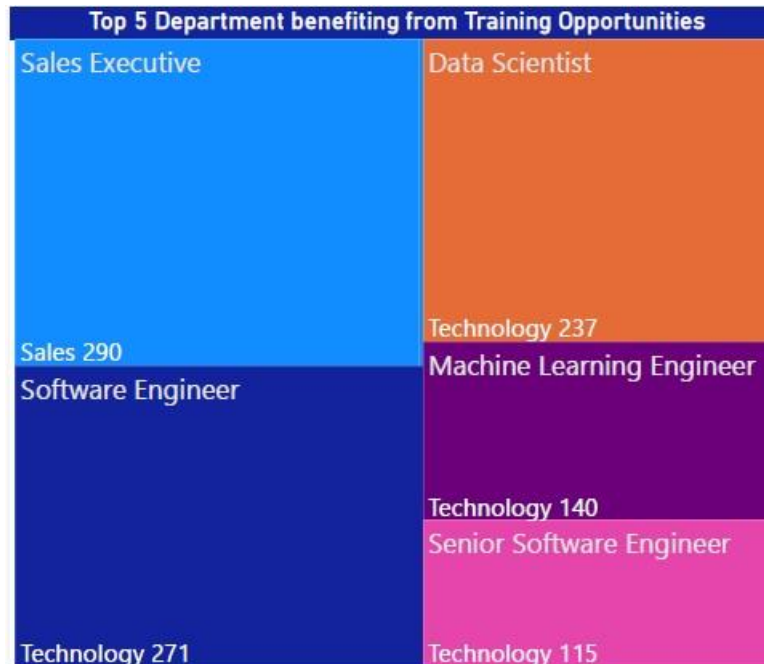
Treemap:

- Job Role: The most significant influencer is "JobRole," with "Sales Executive" having the strongest impact, followed by "Senior Software Engineer."
- Department: The "Department" of "Sales" also plays a substantial role.
- Education Level: "EducationLevel" with a "Doctorate" degree is another influential factor.
- Job Role: "Machine Learning Engineer" has a moderate impact.

Bar Chart:

- Salary Range: The bar chart visually represents the likelihood of a salary range being 100k-200k for different job roles.
- Top Roles: "Sales Executive" has the highest likelihood, followed by "Senior Software Engineer" and "Machine Learning Engineer."

HR Analytics Report

What is the top 5 department benefiting from training opportunities?

The provided treemap illustrates the top 5 departments that have benefited the most from training opportunities within an organization. The size of each segment represents the number of employees who have participated in training programs.

1. Sales Department: The "Sales" department has taken the most training opportunities, with "Sales Executive" being the most popular among their employees.
2. Technology Department: The "Technology" department is the second most active in training, with "Software Engineer," "Senior Software Engineer," "Machine Learning Engineer," and "Data Scientist" being popular opportunities.

Visualizations

- o Attrition Rate by Salary Range
- o Count of Employees by Age Group
- o Attrition Rate and Average of Years Since Last Promotion by Years at Company
- o Ethnicity
- o Education Level
- o Department
- o Job Role
- o Job Satisfaction Rating
- o Count of Employees by Ethnicity
- o Performance Alignment
- o Low Work-Life Balance
- o Training Engagement
- o Positive Manager Relationship

Recommendations

Overall Satisfaction and Engagement

- **Address Neutral Sentiment:** While dissatisfaction is low, the high percentage of neutral responses indicates a need to investigate potential disengagement or lack of strong feelings. Consider conducting employee surveys or focus groups to identify specific areas where improvements can be made.
- **Prioritize High-Dissatisfaction Roles:** Focus on improving the work environment for Sales Representatives, Recruiters, and HR Executives, as these roles exhibit significant dissatisfaction or neutral sentiment.
- **Recognize and Reward High-Performing Roles:** Acknowledge and reward Software Engineers, Data Scientists, and Analytics Managers for their high satisfaction levels and contributions to the organization.

Recruitment and Retention Strategies

- **Analyze Attrition Patterns:** Examine the reasons for high attrition in the Technology department and identify specific factors contributing to employee turnover. Implement targeted strategies to address these issues.
- **Enhance Compensation and Benefits:** Consider reviewing compensation structures to address salary disparities between different roles. Ensure that benefits packages are competitive and meet the needs of employees.
- **Foster a Positive Work Culture:** Create a supportive and inclusive work environment that promotes employee engagement, job satisfaction, and a sense of belonging.

Training and Development

- **Tailor Training Programs:** Identify specific training needs for each department and job role based on the data. Develop targeted training programs to enhance employee skills and knowledge.
- **Measure Training Effectiveness:** Evaluate the impact of training programs on employee performance, job satisfaction, and retention rates.
- **Promote a Culture of Learning:** Encourage continuous learning and professional development by providing opportunities for employees to acquire new skills and advance their careers.

Diversity and Inclusion

- **Analyze Age Diversity:** While the organization exhibits some age diversity, consider implementing strategies to attract and retain employees from a wider range of age groups.
- **Promote Inclusive Practices:** Create an inclusive workplace culture that values diversity and respects individual differences.

HR Analytics Report

Career Development and Growth

- **Provide Clear Career Paths:** Develop clear career paths and progression opportunities for employees to help them visualize their growth within the organization.
- **Offer Mentorship Programs:** Implement mentorship programs to connect employees with experienced colleagues who can provide guidance and support.

By addressing these recommendations, the organization can improve employee satisfaction, engagement, and retention, ultimately leading to a more productive and successful workforce.

Conclusion

The analysis presented in this report reveals several key findings regarding employee satisfaction, retention, and performance within the organization. While there are areas of strength, such as high satisfaction among certain job roles and positive trends in employee count over time, there are also significant challenges that need to be addressed.

Key findings and recommendations include:

- **Addressing neutral sentiment:** The high percentage of neutral responses indicates a need to investigate potential disengagement or lack of strong feelings.
- **Prioritizing high-dissatisfaction roles:** Focus on improving the work environment for Sales Representatives, Recruiters, and HR Executives, as these roles exhibit significant dissatisfaction or neutral sentiment.
- **Analyzing attrition patterns:** Examine the reasons for high attrition in the Technology department and implement targeted strategies to address these issues.
- **Enhancing compensation and benefits:** Review compensation structures to address salary disparities and ensure that benefits packages are competitive.
- **Fostering a positive work culture:** Create a supportive and inclusive work environment that promotes employee engagement, job satisfaction, and a sense of belonging.
- **Tailoring training programs:** Identify specific training needs for each department and job role and develop targeted training programs.
- **Promoting a culture of learning:** Encourage continuous learning and professional development by providing opportunities for employees to acquire new skills and advance their careers.
- **Analyzing age diversity:** Implement strategies to attract and retain employees from a wider range of age groups.
- **Promoting inclusive practices:** Create an inclusive workplace culture that values diversity and respects individual differences.
- **Providing clear career paths:** Develop clear career paths and progression opportunities for employees.
- **Offering mentorship programs:** Implement mentorship programs to connect employees with experienced colleagues who can provide guidance and support.