

HR attrition data analysis project

Probable questions to be answered

1. What is the overall attrition rate across the organization?

- **Attrition Rate:** 16% of employees have left the organization.
- **Conclusion:** The company is experiencing a moderate attrition rate, indicating a need to investigate the underlying causes.

2. What is the attrition rate by department?

- **Sales:** 21%
- **Human Resources:** 19%
- **Technology:** 14%
- **Conclusion:** The Sales department has the highest attrition rate. This may require further investigation into workload, employee satisfaction, or other specific department issues.

3. What is the average salary of employees who have left the company vs. those who have stayed?

- **Employees who left:** Average Salary = \$82,260
- **Employees who stayed:** Average Salary = \$118,860
- **Conclusion:** Employees who left tend to have slightly lower salaries on average, suggesting that compensation might play a role in the decision to leave.

4. What is the relationship between distance from home and attrition?

- **Employees who left:** Average Distance = 22.2 km
- **Employees who stayed:** Average Distance = 22.56 km

- **Conclusion:** There is no significant difference in the distance from home for employees who left versus those who stayed. It seems that distance from home does not play a major role in attrition.

5. Does marital status affect attrition?

- **Single:** 23% attrition
- **Married:** 13.2% attrition
- **Divorced:** 10.1% attrition
- **Conclusion:** Single employees have a slightly higher attrition rate compared to married and divorced employees.

6. How does business travel requirement impact employee attrition?

- **Some Travel:** 15% attrition
- **No Travel:** 8% attrition
- **Travel Frequently:** 25% attrition
- **Conclusion:** Employees who travel frequently seem to have the highest attrition rate, which could indicate work-life balance challenges.

7. How do training opportunities and their utilization relate to attrition?

- **Employees who left:** Average training opportunities taken = 0.16
- **Employees who stayed:** Average training opportunities taken = 0.16
- **Conclusion:** Training opportunities doesn't matter in the attrition rate.

8. What is the impact of years at the company on attrition?

- **Employees who left:** Average Years at Company = 4.8 years
- **Employees who stayed:** Average Years at Company = 7.1 years
- **Conclusion:** Employees who have been at the company for a shorter period tend to leave more often.

9. What is the relationship between environment satisfaction and attrition?

- **Employees with high environment satisfaction (4-5):** 10.1% attrition
- **Employees with low environment satisfaction (1-3):** 22.6% attrition
- **Conclusion:** Employees with higher satisfaction with the work environment have significantly lower attrition rates.

10. Does work-life balance affect employee retention?

- **Employees who left:** Average Work-Life Balance = 3.1
- **Employees who stayed:** Average Work-Life Balance = 3.9
- **Conclusion:** Employees who stayed tend to have better work-life balance, indicating that work-life balance might be a contributing factor in retention.

11. How does job satisfaction influence attrition?

- **High Job Satisfaction (Rating 4-5):** 8.9% attrition
- **Low Job Satisfaction (Rating 1-3):** 21.2% attrition
- **Conclusion:** Employees with higher job satisfaction are less likely to leave, showing that job satisfaction is a key driver of retention.

12. What is the average number of years since the last promotion for employees who left the company?

- **Employees who left:** Average Years Since Last Promotion = 3.9 years
- **Conclusion:** Employees who have not been promoted for several years are more likely to leave the company.

13. Is there a pattern of attrition based on stock options?

- **Stock Option Level 0:** 19.5% attrition
- **Stock Option Level 1:** 15.3% attrition
- **Stock Option Level 2:** 13.7% attrition
- **Conclusion:** Employees with higher stock option levels tend to have lower attrition rates.

14. How does overtime affect employee attrition?

- **Employees who worked overtime (Yes):** 17.3% attrition
- **Employees who did not work overtime (No):** 14.1% attrition
- **Conclusion:** Employees who work overtime have a slightly higher attrition rate, possibly due to burnout or dissatisfaction with work-life balance.

15. Is there a link between department and performance ratings?

- **Sales:** Average Self Rating = 3.8, Manager Rating = 3.7
- **Human Resources:** Average Self Rating = 4.1, Manager Rating = 4.0
- **Technology:** Average Self Rating = 3.9, Manager Rating = 3.9
- **Conclusion:** HR employees have slightly higher performance ratings than other departments, indicating better satisfaction or performance.

16. What is the average tenure of employees who left the company vs. those who stayed?

- **Employees who left:** Average Tenure = 4.8 years
- **Employees who stayed:** Average Tenure = 7.1 years
- **Conclusion:** Employees who have been with the company for a shorter period tend to leave more often.

17. What is the relationship between ethnicity and attrition?

- **Ethnicity Groups:**
 - White: 14.4% attrition
 - Black: 17.9% attrition
 - Hispanic: 16.7% attrition
 - Asian: 13.2% attrition
- **Conclusion:** Black and Hispanic employees have a slightly higher attrition rate, which might be indicative of potential systemic or workplace challenges specific to these groups.

18. How does the number of years in the most recent role affect attrition?

- **Employees who left:** Average Years in Most Recent Role = 1.9 years
- **Employees who stayed:** Average Years in Most Recent Role = 3.4 years
- **Conclusion:** Employees who stay longer in their most recent role are less likely to leave, suggesting that role changes might influence employee satisfaction and retention.