

## **Employee Dataset**

1. What is the average age of employees in the company?
2. What is the distribution of genders among employees?
3. How does salary vary across different departments?
4. What are the most common job roles in the company?
5. How many employees have experienced attrition?
6. What is the average number of years employees have been with the company?
7. Which department has the highest average years of service?
8. How many employees work overtime?
9. How does salary differ based on education level?
10. What is the most common education field among employees?
11. How does distance from home affect employee attrition?
12. What is the average salary of employees in each job role?
13. How does ethnicity vary across different departments?
14. How many employees have received promotions in the last year?
15. What is the average number of years since the last promotion for employees?
16. What is the distribution of marital status among employees?
17. How does the distance from home affect the number of years employees stay with the company?
18. What is the average salary of male and female employees?
19. How many employees have changed job roles within the company?
20. What is the most common month and day for hiring new employees?

## **Technical**

21. Is there any correlation between years of experience (YearsAtCompany, YearsInMostRecentRole, YearsSinceLastPromotion, YearsWithCurrentManager) and salary?
22. Which job role has the highest average salary, and which one has the lowest?
23. How does age correlate with attrition? Are older employees more likely to leave the company?
24. What is the turnover rate (attrition percentage) for each department?
25. How does the level of education (Education) affect the likelihood of employees being in managerial roles (JobRole)?
26. What is the distribution of employees based on the day and month they were hired?
27. How does the distance from home affect the number of promotions an employee receives?
28. Are there any specific education fields that have a higher representation in certain departments?
29. What are the top 5 job roles with the highest overtime hours, and do they have higher salaries as well?

30. How does the salary of employees with the same job role vary based on their years of experience (YearsAtCompany)?

## **Advanced**

31. Can we identify any patterns in employee attrition based on a combination of demographic factors (age, gender, ethnicity, education, etc.) and job-related factors (job role, years of experience, salary, etc.) using machine learning techniques like decision trees or random forests?
32. Is there any evidence of salary discrimination based on gender or ethnicity within specific departments or job roles, and can we build a statistical model to identify and quantify potential salary disparities?