Business & Analytical Questions for the Project

1️⃣ Employee Demographics & Distribution

1. What is the distribution of employees across different **departments**?
2. What is the **gender ratio** in each department?
3. What is the **age distribution** of employees?
4. What is the distribution of employees based on **education levels**?
5. Which **recruitment channel** has been the most effective in hiring employees?

2️⃣ Performance & Training Analysis

6. How does the **average training score** vary across different departments?
7. Does the **number of training sessions** correlate with an employee's performance?
8. Do employees with a higher **previous year rating** receive more training?
9. What is the relationship between **KPIs met (>80%)** and **average training score**?
10. What is the **impact of length of service** on training scores?

3️⃣ Promotions & Career Growth

11. What percentage of employees received **promotions**?
12. Which department had the **highest number of promotions**?
13. What is the **promotion rate by gender**?
14. How do **previous year ratings** affect an employee's chance of **promotion**?
15. Do employees who won **awards** have a higher chance of getting promoted?

4️⃣ KPI & Awards Impact

16. What percentage of employees have met their **KPIs (>80%)**?
17. How many employees have won **awards**, and in which departments?
18. Do employees who **met their KPIs** get more promotions?
19. Is there a link between **awards won** and **high KPI performance**?
20. Do employees with **higher training scores** tend to **win more awards**?

5️⃣ Region-Based Insights

21. Which **region** has the highest number of employees?
22. Is there a difference in **promotion rates** across different **regions**?
23. What is the distribution of **education levels** across different **regions**?
24. Do certain **regions** have a higher **percentage of employees meeting KPIs**?
25. Is there a pattern in **training scores** across different regions?

📊 Graphical Questions for Visualization

You can use Python's **Matplotlib** and **Seaborn** to create visual insights:

1. **Bar Chart** – Number of employees in each department
2. **Pie Chart** – Gender distribution of employees
3. **Box Plot** – Age distribution across departments
4. **Scatter Plot** – Age vs. Length of service
5. **Histogram** – Distribution of average training scores
6. **Bar Plot** – Number of promotions by department
7. **Heatmap** – Correlation between numeric variables
8. **Stacked Bar Chart** – Education levels in each department
9. **Violin Plot** – Impact of previous year rating on promotions
10. **Line Chart** – Promotion trend over years (if available)