NAME- ASHMI DATTA

Engagement Analysis Report

AIM : This project aims to provide insights into the factors influencing employee attrition and predict which employees are likely to leave the company

DATASET DESCRIPTION:

The dataset typically includes several features that provide insights into employee characteristics, job satisfaction, and performance. While the exact features may vary, here's a general list of common features you might find in such a dataset:

1. **Employee ID:** A unique identifier for each employee.

2. **Age:** The age of the employee.

3. **Attrition:** A binary variable indicating whether the employee has left the company (1) or is still employed (0).

4. **Business Travel:** The frequency and nature of business-related travel (e.g., "Travel_Rarely," "Travel_Frequently," "Non-Travel").

5. **Department:** The department to which the employee belongs (e.g., "Sales," "Research & Development," "Human Resources").

6. **Distance From Home:** The distance of the employee's residence from the workplace.

7. **Education:** The employee's level of education (e.g., "1: 'Below College'," "2: 'College'," "3: 'Bachelor'," "4: 'Master'," "5: 'Doctor').

8. **Education Field:** The field in which the employee's education lies (e.g., "Life Sciences," "Medical," "Marketing").

9. **Environment Satisfaction:** The level of satisfaction with the work environment on a scale.

10. **Gender:** The gender of the employee.

11. **Job Involvement:** The degree to which the employee is involved in their job.

12. **Job Level:** The level or rank of the employee's position.

13. **Job Role:** The specific role or title of the employee's job.

14. **Job Satisfaction:** The level of satisfaction with the job on a scale.

15. **Marital Status:** The marital status of the employee.

16. **Monthly Income:** The monthly salary of the employee.

17. **Num Companies Worked:** The number of companies the employee has worked for.

18. **Over Time:** Whether the employee works overtime or not.

19. **Performance Rating:** The performance rating of the employee.

20. **Relationship Satisfaction:** The level of satisfaction with relationships at the workplace.

21. **Stock Option Level:** The level of stock options provided to the employee.

22. **Total Working Years:** The total number of years the employee has been working.

23. **Training Times Last Year:** The number of training sessions the employee attended last year.

24. **Work-Life Balance:** The balance between work and personal life.

25. **Years At Company:** The number of years the employee has been with the current company.

26. **Years In Current Role:** The number of years the employee has been in their current role.

27. **Years Since Last Promotion:** The number of years since the last time the employee was promoted.

28. **Years With Current Manager:** The number of years the employee has been working under the current manager.

POWER BI DASBOARD:
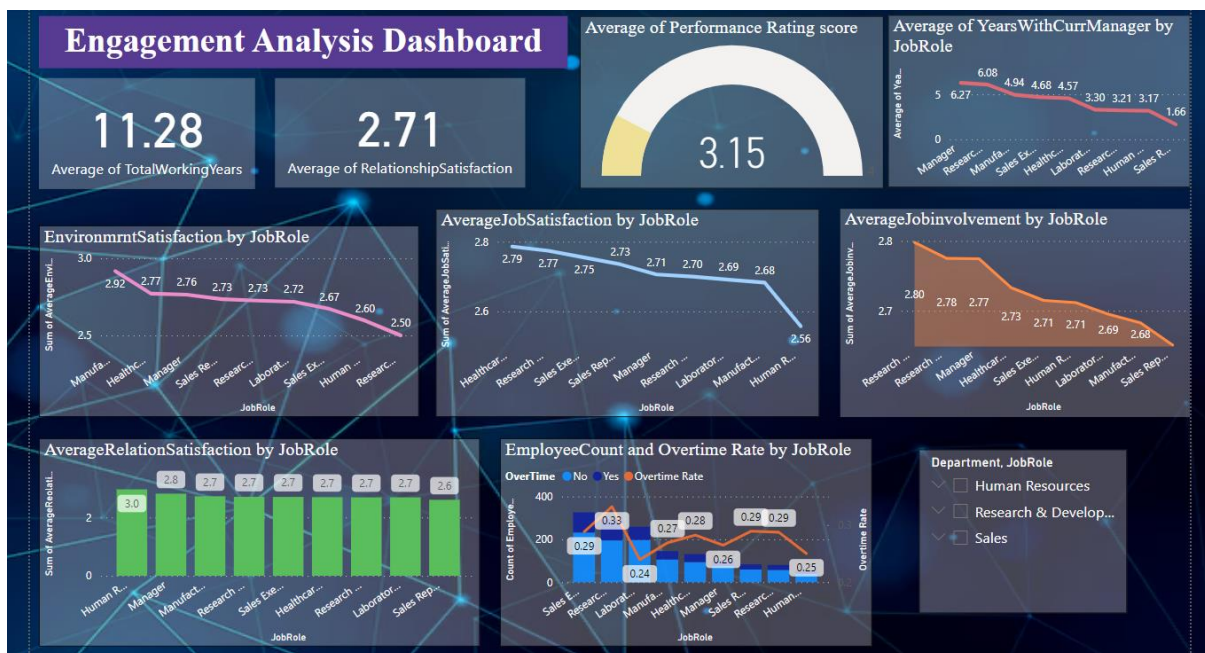
INTERPRETATIONS:

1) The average work-life balance score of 2.76 would typically be interpreted based on the scale used for the work-life balance measure. The score is not critically low, but it does indicate that there is room for improvement to ensure employees feel they have a good to excellent work-life balance.

2) Manufacturing Director (2.682759) and Sales Representative (2.650602) have the lowest job involvement scores. These roles show relatively lower job involvement. It might be due to repetitive tasks, high pressure for sales targets, or other factors that impact engagement negatively.

3) the roles with the lowest relationship satisfaction scores are Sales Representative: 2.602410 and Research Director: 2.687500.
   Sales representatives may experience lower relationship satisfaction due to high-pressure sales targets, frequent customer interactions, or other job-specific stressors that could impact relationships with colleagues or supervisors.
   Research Directors typically oversee research teams and projects. Factors influencing their relationship satisfaction could include interactions with team members, collaboration with other departments, and support from upper management

4) According to the data: Sales Representative: Overtime Rate = 0.289157 (approximately 29% of Sales Representatives work overtime)

   Impact on Relationship Satisfaction:

   - Potential Cause: High overtime can potentially lead to increased stress, fatigue, and reduced time for personal life among Sales Representatives.
   - Relationship Satisfaction: The demanding workload due to overtime might adversely affect relationships with colleagues and supervisors.

5) According to the data Sales Representative: Years with Current Manager = 1.662651 (approximately 1.66 years)

   Impact on Relationship Satisfaction:

- Potential Cause: Shorter durations with managers may contribute to lower relationship satisfaction among Sales Representatives.
- Importance of Stability: Building trust and understanding typically require time, and frequent changes in management can disrupt these dynamics

6) has the lowest average performance rating among the listed job roles, with a rating of 3.1.

   Impact on Relationship Satisfaction:

- Potential Cause: Lower performance ratings may correlate with increased stress or dissatisfaction among team members and stakeholders.
- Effect on Relationships: This can potentially affect relationship satisfaction as it may reflect difficulties in meeting expectations or achieving organizational goals.

7) Research Director: Environment Satisfaction = 2.500000 (lowest among the listed job roles)

   Impact on Relationship Satisfaction:

- Potential Cause: Poor environment satisfaction can contribute to decreased morale, higher stress levels, and challenges in fostering positive relationships among team members.
- Effect on Relationships: Employees may feel less engaged or supported, affecting their overall relationship satisfaction within the organization.

8) Research scientists have the highest percentage of employees working overtime at 33.22%.Impact on Work-Life Balance: Such a high overtime rate suggests that many research scientists might face challenges in maintaining a healthy work-life balance.
9) The average job satisfaction score for Research Directors is 2.7, which is lower compared to some other roles in the organization.

   Impact of Salary Increase:

- Potential Cause: A lower percentage of salary increase for Research Directors compared to their expectations or market standards could contribute to lower job satisfaction.
- Financial Motivation: Salary is a critical factor influencing job satisfaction, and disparities in salary increases might lead to feelings of undervaluation or dissatisfaction.

RECOMMENDATIONS:
- Implement flexible working hours and remote work options.
- Regularly review and manage workloads to prevent excessive overtime.

- Enrich roles for Manufacturing Directors and Sales Representatives.
- Set clear goals and provide regular feedback

- Implement retention strategies and career development plans.

- Develop succession plans for smooth managerial transitions

- Develop performance improvement plans.
- Provide targeted training and development opportunities

- Promote work-life balance initiatives.
- Recognize and reward research scientists' effort