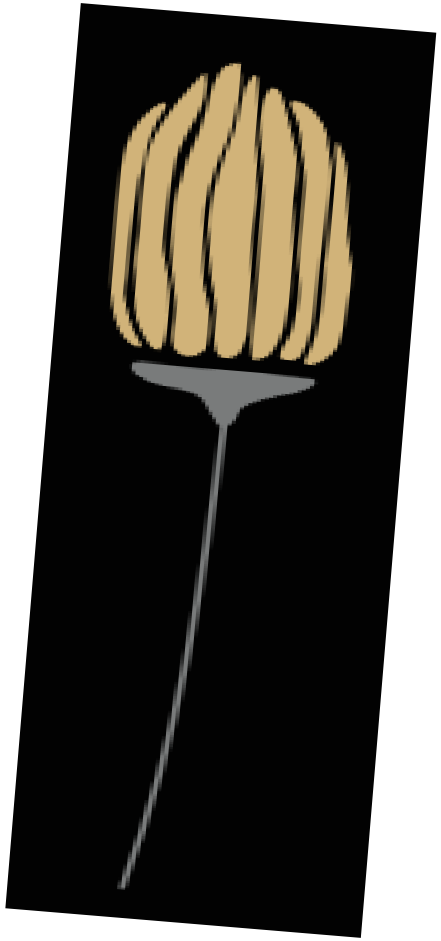
EMPLOYEE DATA ANLAYSIS WITH EXCEL



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PROJECT TITLE

EMPLOYEE PERFORMANCE ANALYSIS WITH EXCEL

AGENDA

- PROBLEM STATEMENT
- PROJECT OVERVIEW
- END USERS
- OUR SOLUTIONS AND PROPOSITION
- DATASET DESCRIPTION
- MODELLING APPROACH
- RESULTS AND DISCUSSION
- CONCLUSION

Problem Statement

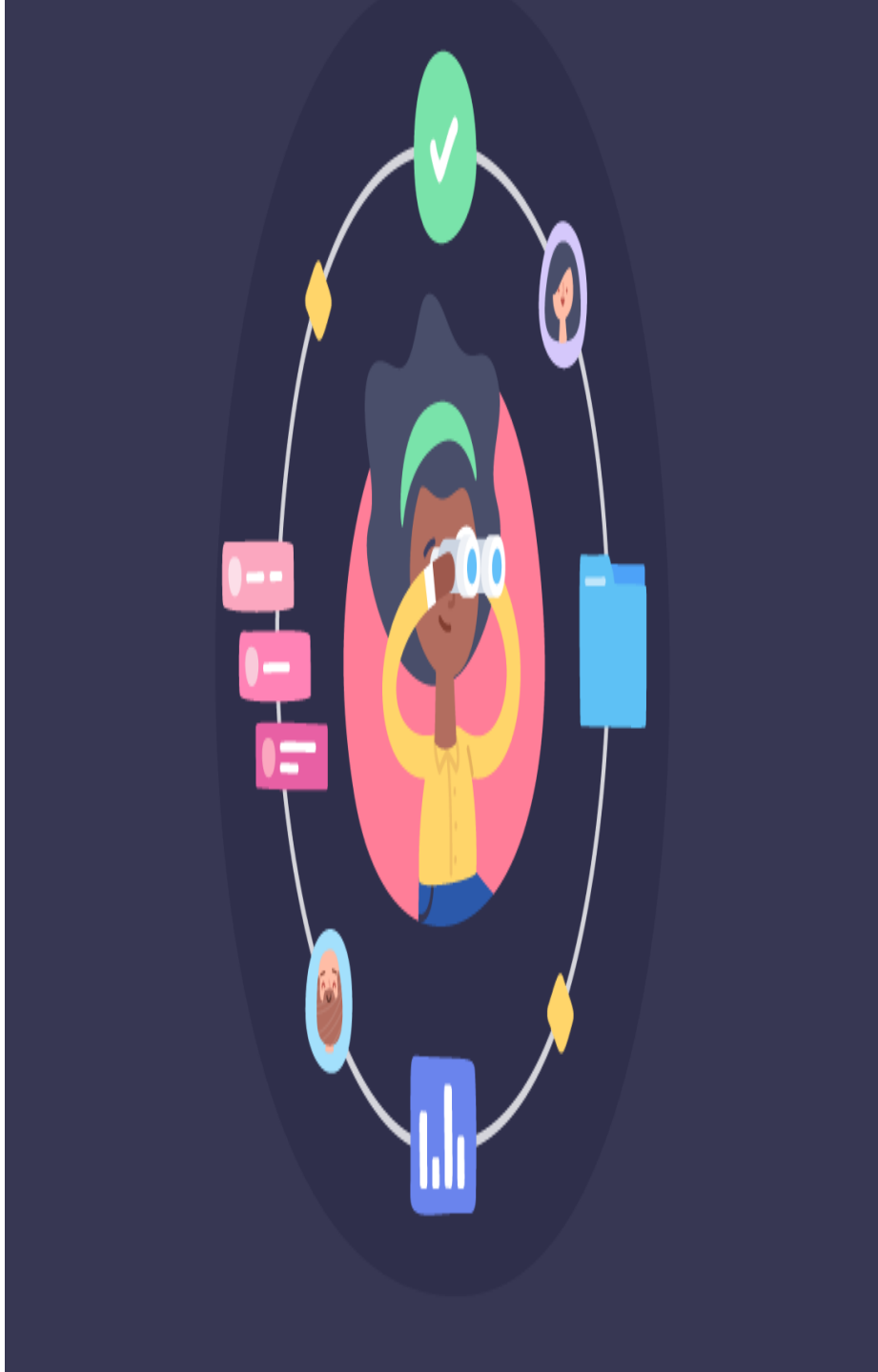
Objective: To analyze employee performance data across various business units, identifying trends, high performers, and areas for improvement.

Scope:Clean and explore performance data.Analyze ratings and performance levels by business unit.Visualize performance trends and generate a summary report.

Outcome: Provide insights for informed decision-making on employee development and performance management.

PROJECT OVERVIEW

The goal of this project is to analyze and visualize the distribution of employee performance levels across different business units. The analysis will help identify areas of strength and those requiring improvement within the organization.



End User

- 1. HR Managers
- 2. Department Heads
- 3. Executives/Senior Management
- 4. Performance Analysts
- 5. Learning & Development Teams
- 6. Workforce Planning Teams

Solution: Employee Performance Analysis System

Solution Overview: Develop an automated, data-driven system for analyzing employee performance across various business units. The system will involve data integration, performance analytics, and interactive dashboards for visualization. The key components include:

1. Data Integration and Cleaning:Automate data extraction and cleaning to ensure accuracy and consistency in employee performance records.

2. Performance Analytics:Use statistical and machine learning techniques to analyze trends, identify high performers, and detect areas of concern.

3.Interactive Dashboards:Develop user-friendly dashboards for real-time performance monitoring, enabling management to drill down into specific business units or employees.

4.Reporting and Recommendations:Generate comprehensive reports with actionable insights and tailored recommendations for HR and management teams.

Value Proposition:

1. Enhanced Decision-Making:Empower HR and management with data-driven insights, leading to more informed and strategic decisions on promotions, rewards, and employee development.

2. Improved Employee Performance:By identifying high and low performers, the organization can take targeted actions to boost overall productivity and address performance issues effectively.

3. Optimized Resource Allocation:Allocate resources more efficiently by understanding the strengths and weaknesses of different business units and teams.

4. Increased Employee Retention:Early detection of performance dips and trends allows for timely interventions, reducing the risk of employee turnover

5. Scalable and Customizable:The system can be adapted to handle growing data volumes and changing business needs, ensuring it remains relevant and useful as the organization evolves.

Dataset Description

- - *Employee Data*: Includes employee ID, name, job title, business unit, supervisor, and contact information.
- - *Demographics*: Contains data on gender, race, marital status, date of birth, and location.-
- *Job Details*: Information on job function, start date, exit date, and employee status.- *
- Performance Metrics*: Performance scores, performance levels (e.g., HIGH, LOW, MED, VERY HIGH), and employee ratings.
- *Other Attributes*: Includes additional details such as email, location code, and job function descriptions.

Modeling Approach for Employee Performance Analysis

1. Data Preprocessing:

   Clean and normalize data.Engineer features like tenure and department averages.

2. Descriptive Analytics:

   Generate summary statistics and visualizations to identify performance patterns.

3. Segmentation Analysis:

   Use clustering to group employees by performance and analyze business unit performance.

4. Predictive Modeling

   Apply regression and classification models to predict and classify employee performance levels.Use time series models for performance trend forecasting

5. Model Evaluation:

   Evaluate and tune models using cross-validation and metrics like RMSE, accuracy, and F1-score.

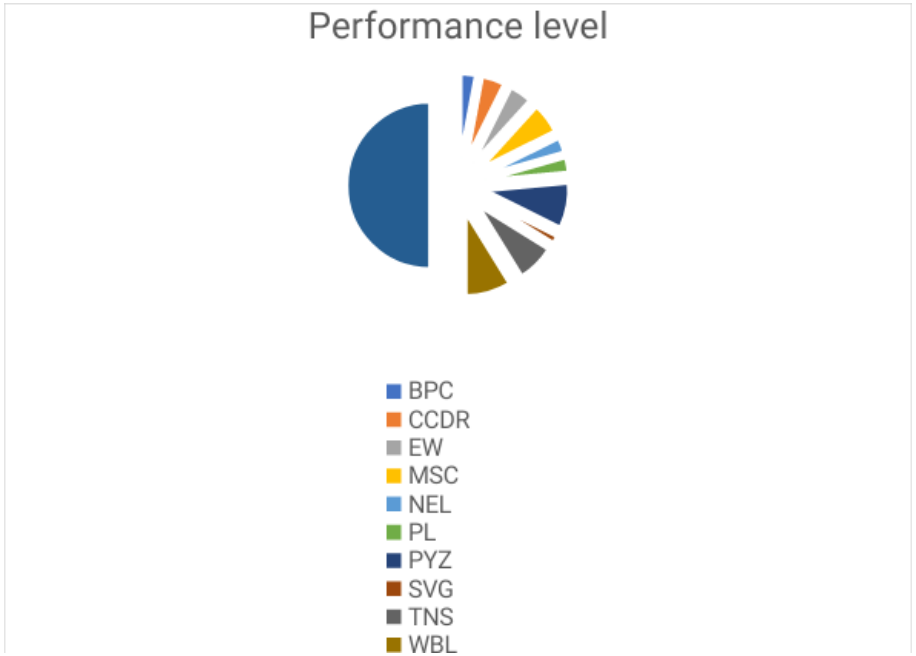
6. Deployment and Monitoring:

   Deploy the models for real-time analysis and continuously update them for accuracy.

Result

Count of Performance level	Performance level				
BusinessUnit	HIGH	LOW	MID	VERY HIGH	**Grand Total**
BPC	2	2	9	2	**15**
CCDR	3	10	7	2	**22**
EW	3	6	9	2	**20**
MSC	4	7	8	3	**22**
NEL	2	10	5	1	**18**
PL	2	7	5	1	**15**
PYZ	6	7	5	3	**21**
SVG	1	8	10	2	**21**
TNS	5	8	10	2	**25**
WBL	6	4	8	2	**20**
Grand Total	**34**	**69**	**76**	**20**	**199**

Result



Conclusion

By implementing this performance analysis solution, the organization gains a powerful tool to visualize and understand employee performance across various business units. The structured modeling approach, from data cleaning to the development of interactive dashboards, ensures that the insights generated are accurate, actionable, and aligned with organizational goals. This solution not only aids in identifying areas of excellence and concern but also empowers decision-makers to allocate resources effectively, tailor employee development programs, and drive overall business success.