### loyee Data Analysis using Excel





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# **PROJECT TITLE**

**Employee Performance Analysis using Excel** 

# **AGENDA**

- 1.Problem Statement
- 2. Project Overview
- 3.End Users
- 4.Our Solution and Proposition
- 5. Dataset Description
- 6. Modelling Approach
- 7. Results and Discussion
- 8. Conclusion



### PROBLEM STATEMENT

### IDENTIFYING KEY PERFORMANCE INDICATOR:

The primary challenge is to determine the factors that most significantly impact employee performance.

### PERFORMANCE PREDICTION:

Predict which employees are at risk of underperforming based on historical data.

#### **IMPROVEMENT STRATEGIES:**

Suggest data-driven strategies to improve employee performance.



## **PROJECT OVERVIEW**

### OBJECT:

To build a data-driven model that accurately assesses and predicts employee performance.

### SCOPE:

Includes data collection, preprocessing, model development, evaluation, and deployment.

#### TIMELINE:

Estimated completion within 3-6 months, with milestones for each phase.



### WHO ARE THE END USERS?

HR MANAGER: To identify trends, predict performance, and

plan interventions.

**TEAM LEADER:** For real-time performance monitoring and feedback.

EMPLOYEES: To gain insights into their performance metrics and areas for improvement.

**DATA SCIENTISTS/** 

**ANALYST'S:** To continually improve and adapt the model based on new data.

### **OUR SOLUTION AND ITS VALUE PROPOSITION**



Performance Prediction Model:

Develop a model to predict future employee performance.

Dashboard Integration:

Provide a user-friendly dashboard for man<mark>agers and</mark> HR to visualize performance metrics.

Customization:

Adapt the solution to specific organizational needs different industries.

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# **Dataset Description**

Employee Data: Includes demographics, job role, salary, and tenure.

Performance Metrics: Historical performance ratings, KPIs, and manager evaluations.

Engagement Scores: Employee engagement survey results.

Training: Information on completed training programs and development.

Attendance Data: Records of attendance, leaves, and punctuality.

### THE "WOW" IN OUR SOLUTION

Predictive Accuracy: Our solution leverages advanced machine learning algorithms to achieve high predictive accuracy, allowing organizations to anticipate performance trends and take proactive actions.

Real-time Insight s: The integration of real-time data feeds enables continuous monitoring of employee performance, providing instant insights and allowing for timely interventions.

Customizable Dashboards: We offer dynamic, user-friendly dashboards that can be tailored to the specific needs of different user roles, from HR managers to team leaders, ensuring relevant insights are delivered to the right people.





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### MODELLING

### Data-Driven Approach:

We start with thorough data exploration and feature engineering to ensure that the most relevant factors influencing performance are included in the model.

#### Model Selection:

A variety of machine learning models are tested, including Random Forest, Gradient Boosting, and Neural Networks, to identify the best fit for the data and the problem at hand.

#### Hyperparameter Tuning:

Advanced techniques such as Grid Search and Random Search are employed to fine-tune the model parameters, maximizing predictive accuracy and performance.

#### Cross-Validation:

We use cross-validation to ensure the robustness and generalizability of the model, reducing the risk of overfitting and ensuring it performs well on unseen data.

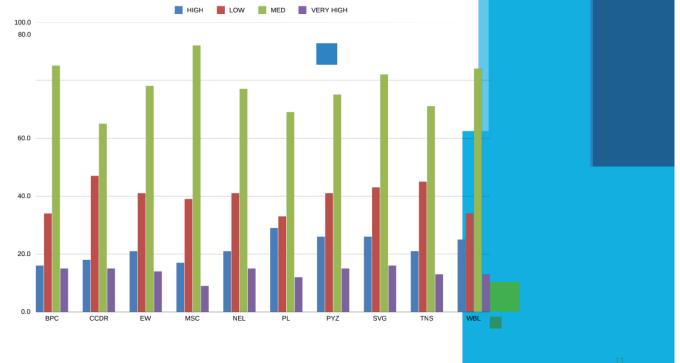
#### Model Interpretation:

Beyond just prediction, our models are designed to be interpretable, providing clear insights into which factors are driving performance outcomes, thereby supporting actionable decision-making

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# **RESULT**





## conclusion

Summary of Findings: Recap of the key results and their implications for the organization.

Business Impact: How the model can be used to improve overall employee performance and retention.

Future Work: Suggestions for further improvement, such as incorporating more real-time data or refining the model.

Scalability: Discuss the potential for scaling the solution across larger or different organizations.

Final Thoughts: Emphasize the importance of data-driven decision-making in employee performance management.