

# Employee 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 managers and HR to visualize performance metrics.

**Customization:**  
Adapt the solution to specific organizational needs different industries.



# 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 Insights:** 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.



# 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:

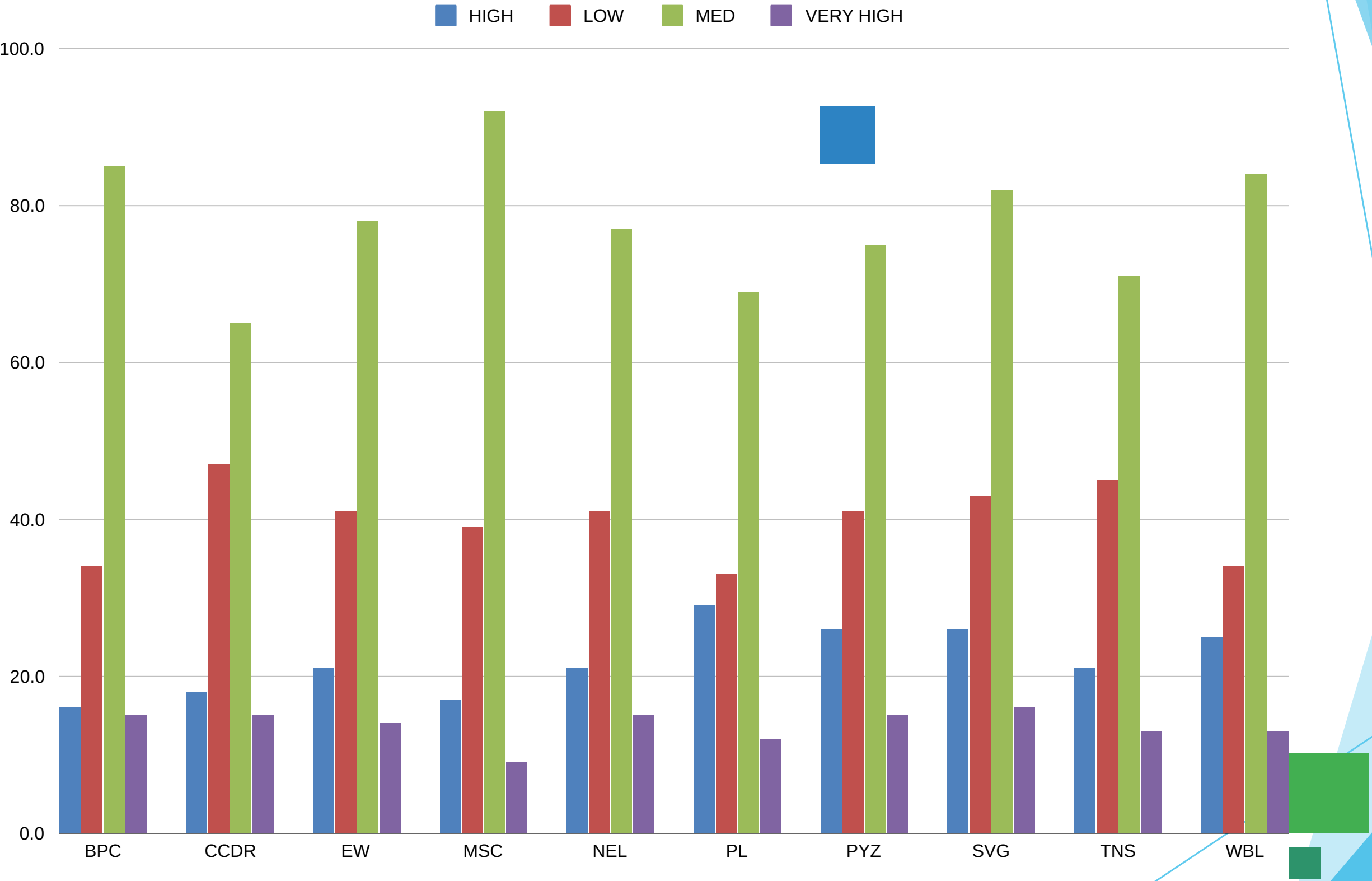
We use cross-validation to ensure the robustness and generalizability of the model, reducing the risk of overfitting and ensuring it performs well on unseen data.

## 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

# RESULT

# S



# 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.