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

Organizations struggle to identify and address the factors affecting employee turnover, performance, and satisfaction. Without accurate data insights, it’s challenging to implement effective retention and engagement strategies. The problem is to create a data-driven solution that predicts and mitigates these issues, leading to improved employee outcomes and organizational success.

PROJECT OVERVIEW

•This project develops a data-driven solution to analyze employee metrics, focusing on predicting turnover, assessing performance, and improving job satisfaction. By leveraging advanced modeling techniques, we aim to provide actionable insights that help organizations enhance retention, boost productivity, and create a better work environment.

WHO ARE THE END USERS?

- HR team
- HR specialist
- Employee relations specialist
- Investors

OUR SOLUTION AND ITS VALUE PROPOSITION

Our Solution:

We provide an employee data analysis tool that uncovers key workforce trends, offering actionable insights to improve retention and performance.

Value Proposition:

Our solution helps organizations boost employee engagement and reduce turnover, leading to a more motivated and productive workforce, which drives better business results.

Dataset Description

- Employee ID: Unique identifier for each employees
- Age: Employee's age
- Gender: Gender of the employee.
- Department: Employee’s department.
- Tenure: Length of employment (years).
- Job Role: Specific role within the co
- Performance Rating: Evaluation of employee performance.
- Salary: Annual salary.
- Turnover: Indicator of whether the employee left the company.
- Job Satisfaction: Employee's satisfaction level with their job.

THE "WOW" IN OUR SOLUTION

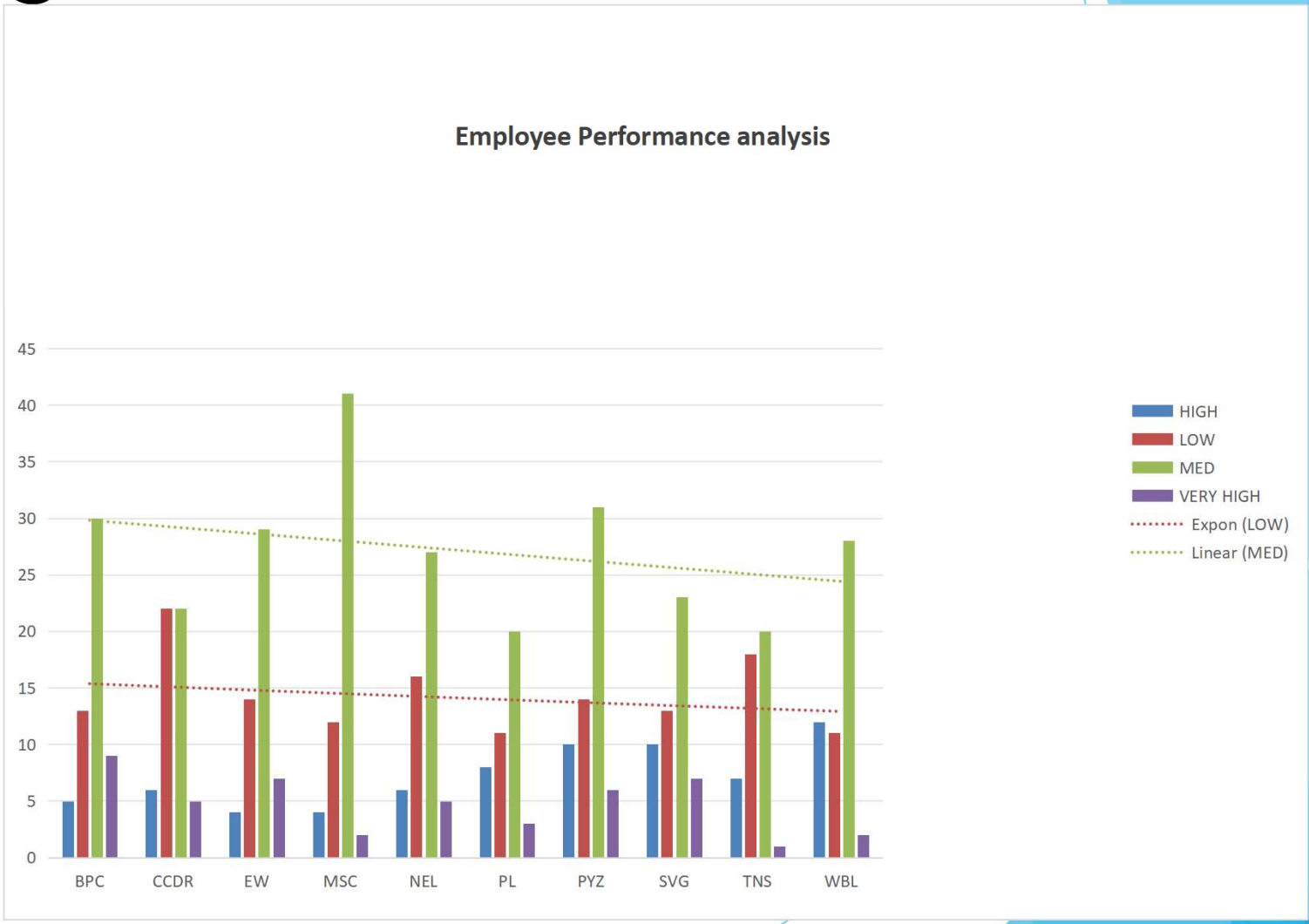
Our solution stands out by delivering not just data, but deep, actionable insights that reveal hidden patterns in employee behavior. With intuitive visualizations and predictive analytics, we make it easy for organizations to proactively address issues like turnover and performance dips before they become problems. The "wow" factor is in how effortlessly our solution transforms complex data into clear, impactful strategies that drive meaningful change in employee engagement and business success.

MODELLING

Our modeling approach focuses on predicting key outcomes like employee turnover, performance, and job satisfaction.

- Turnover Prediction: We use classification models (e.g., logistic regression, random forests) to predict the likelihood of employees leaving, based on factors like tenure and job satisfaction.
- Performance Prediction: Regression models help estimate employee performance, allowing us to identify high-potential employees and those needing support.
- Clustering: Techniques like K-means group employees by similar traits, enabling targeted engagement strategies.
- Feature Importance: We analyze which factors most influence outcomes, guiding priorities for improvement.
- This modeling framework provides actionable insights to enhance employee retention and performance.

RESULTS


Employee Performance analysis
45
40
35
30
25
20
15
10
5
0
BPC
CCDR
EW
MSC
NEL
PL
PYZ
SVG
TNS
WBL
HIGH
LOW
MED
VERY HIGH
Expon (LOW)
Linear (MED)

conclusion

The employee data analysis reveals significant trends, such as a strong correlation between employee tenure and performance, indicating that experienced employees tend to excel. However, higher turnover in certain departments needs attention. Addressing these areas through targeted initiatives can enhance retention and satisfaction. These insights will guide the organization in making data-driven decisions to improve overall workforce productivity and engagement.