

# 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



A Company is facing challenges in managing its workforce effectively due to limited insights into key employee metrics. The goal is to analyze the employee data to identify the patterns, trends, and potential issues related to performance, retention, diversity, and satisfaction.

Specifically, the company seeks to address the concerns.

- \* Employee attrition
- \* Performance Optimization
- \* Workforce Diversity
- \* Absenteeism and Productivity




# PROJECT OVERVIEW


- The Employee Data Analysis project aims to leverage workforce data to optimize HR management and decision-making. By analyzing key metrics like employee attrition, performance, diversity, compensation, and engagement, the project will uncover insights to improve retention, enhance employee performance, foster diversity, and ensure fair compensation. The ultimate goal is to provide actionable data-driven insights that help the organization make informed decisions, improve employee satisfaction, and drive business success.



# WHO ARE THE END USERS?



Employee  
HR Manager  
Departmental Manager  
Executives and Leadership  
Chief Executive Officer  
Finance Department  
Data Analysis  
Data scientists



# OUR SOLUTION AND ITS VALUE PROPOSITION



Filtering-Missing  
Charts- Visualization, Reports  
Pivot Table- Summary  
Conditional techniques- Identify

# Dataset Description

Employee Dataset Kaggle

26 features

9 features

Employee Id

Name-text

Gender-male,female

Rating-numeric

Performance-text

Business unit-text

Business type-text



# THE "WOW" IN OUR SOLUTION



The solution in employee data analysis lies in its ability to predict employee attrition using machine learning, provide personalized development plans, and offer real-time dashboards for performance and workforce insights. This empowers HR and management to make proactive decisions, retain top talent, and optimize employee satisfaction and performance.



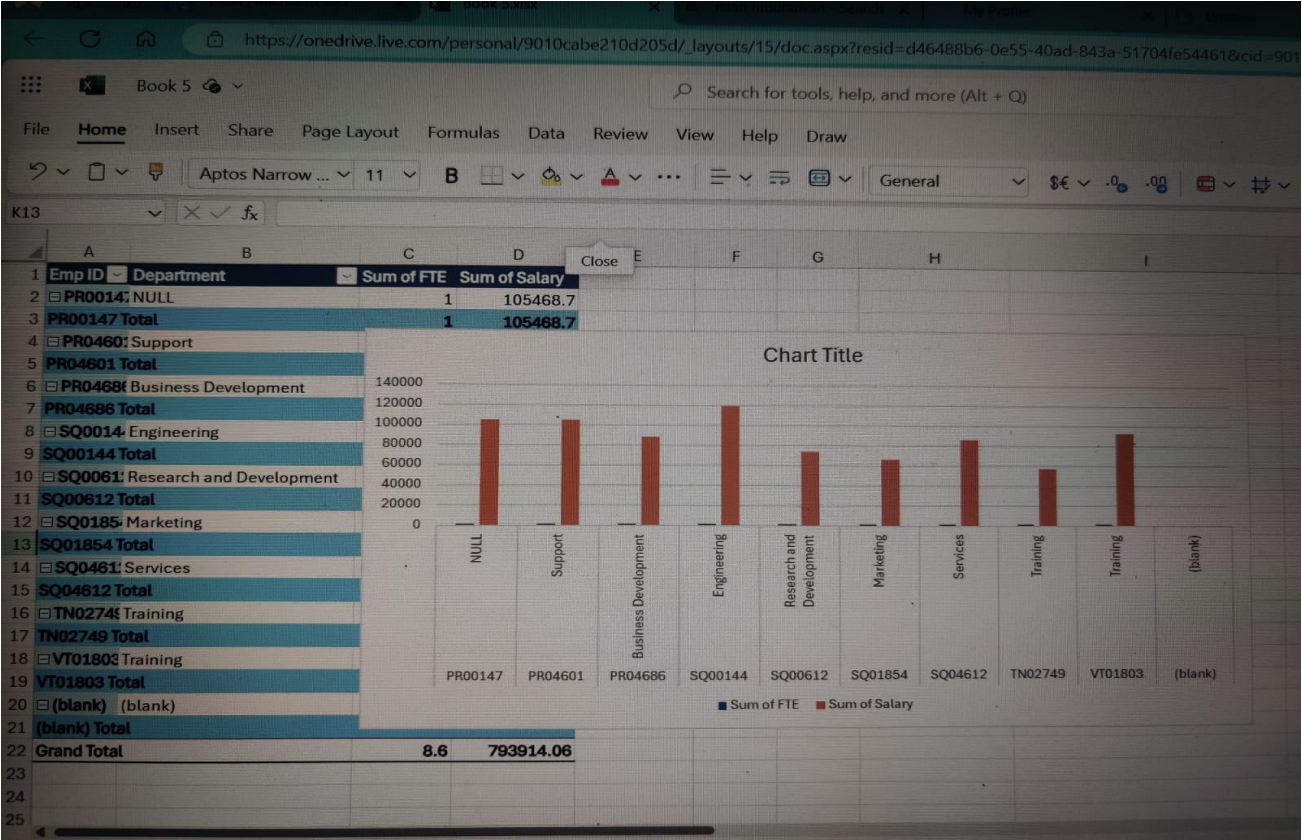
# MODELLING

1. Data Preprocessing : Clean and prepare employee data by handling missing values, standardizing formats, and encoding categorical variables like job roles, departments, and performance ratings.
2. Exploratory Data Analysis (EDA) : Analyze key trends and patterns, such as correlations between variables like tenure, salary, and attrition, to gain initial insights into the workforce.
3. Predictive Modeling : Use machine learning models (e.g., logistic regression, decision trees, or random forests) to predict employee attrition, performance, or absenteeism based on historical data.

# MODELLING

4. Feature Engineering : Create new features (e.g., employee satisfaction score, promotion frequency) that can improve model performance and provide deeper insights into employee behaviors and outcomes.
5. Model Evaluation & Optimization: Evaluate model performance using metrics like accuracy, precision, recall, and ROC-AUC, then optimize using techniques like cross-validation and hyperparameter tuning.

# RESULTS



# conclusion

Employee data analysis provides valuable insights into workforce trends, enabling organizations to make data-driven decisions that improve employee retention, performance, and satisfaction while optimizing overall business efficiency.