

# Employee Data Analysis using Excel



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# PROJECT TITLE



## Employee Attendance 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



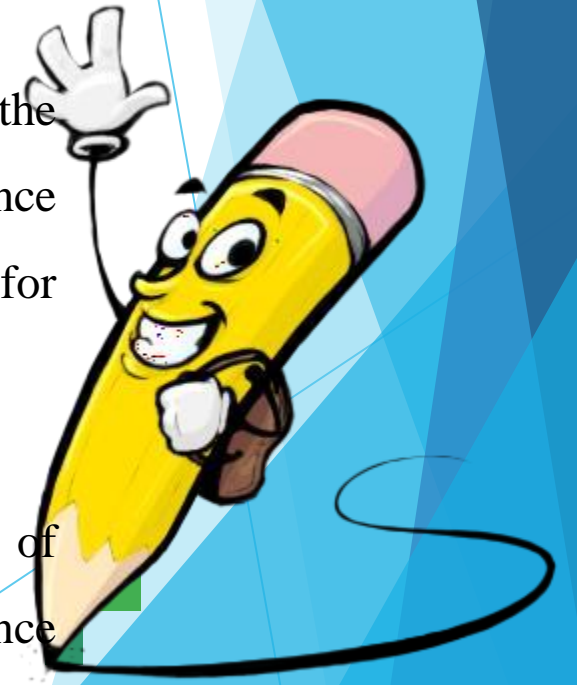
# PROBLEM STATEMENT

- High absenteeism rates affecting productivity.
- Frequent tardiness leading to operational inefficiencies.
- Manual attendance tracking prone to errors and delays.
- Lack of real-time attendance data for decision-making.
- Difficulty identifying patterns in absenteeism and tardiness.



# PROJECT OVERVIEW

- The objective of this project is to develop a comprehensive system for analyzing employee attendance data. This system aims to identify patterns of absenteeism and tardiness, improve overall attendance rates, and provide actionable insights to enhance workforce management and productivity.
- The project will cover the analysis of attendance data for all employees within the organization over a specified period. It will involve the deployment of attendance tracking technology, data analysis, and the creation of dashboards and reports for management use.
- The final deliverables will include a functioning attendance tracking system, a set of analytical tools, and a series of reports with recommendations for improving attendance rates and workforce productivity.



# WHO ARE THE END USERS?

**1.Human Resources (HR) Department:** Uses the system to monitor attendance, manage payroll, enforce policies, and address attendance-related issues.

**2.Team Managers and Supervisors:** Leverage the data to track their team's attendance, identify patterns, manage schedules, and improve team productivity.

**3.Senior Management and Executives:** Utilize attendance insights for strategic decision-making, resource allocation, and evaluating overall workforce performance.

**4.Employees:** May have access to their own attendance records to track their time, request corrections, and manage leave requests.

**5.Compliance and Audit Teams:** Use the data to ensure the organization is meeting legal and regulatory requirements regarding attendance and working hours.

# OUR SOLUTION AND ITS VALUE PROPOSITION



**1. Cost-Effectiveness:** Cost savings from reduced administrative work or errors. Return on investment (ROI) figures if applicable. Potential long-term savings.

**2. Accuracy and Reliability:** Improvements in data accuracy (e.g., reduction in human errors). Real-time data updates and how this improves decision-making. Metrics showing increased accuracy (e.g., error rates before and after implementation).

**3. Value Proposition:** Time savings, increased accuracy, compliance, employee satisfaction, and cost savings. (e.g., improving productivity, enhancing employee experience).

# Dataset Description

Employee: Kaggle

Features:30

8 Features:

Employee id

Employee name

Employee type

No. of days worked

Total working days

Hours worked

Attendance rate

Percent of absenteeism



# THE "WOW" IN OUR SOLUTION

**1. Automated Data Collection:** Integration with biometric systems or online timesheets to automate the attendance recording process. Reduction in manual errors and time spent on data entry.

**2. Employee Self-Service Portal:** Allowing employees to view their attendance records, request time off, and correct any discrepancies directly. Enhanced transparency and employee empowerment.

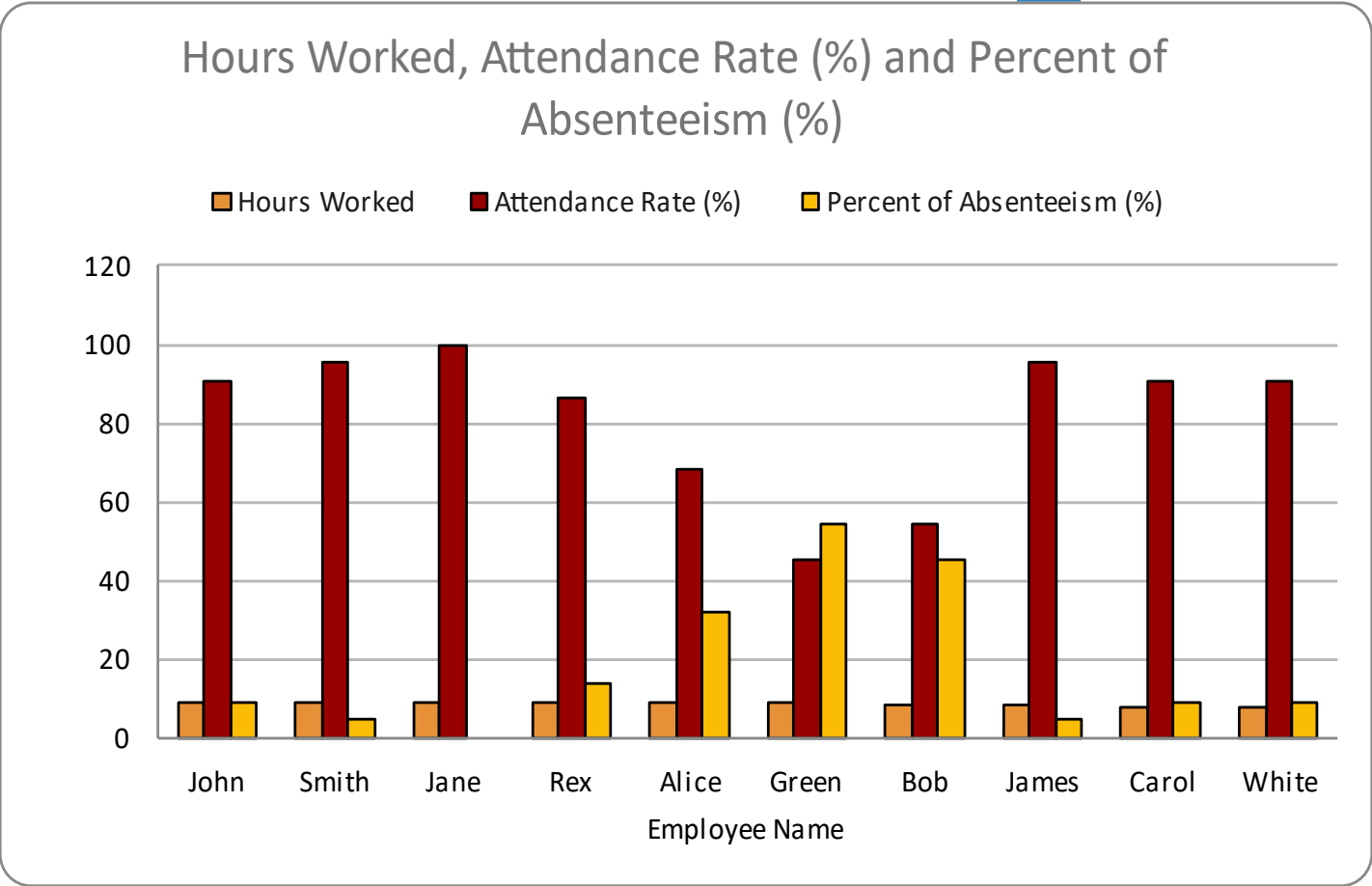
**3. Mobile Accessibility:** Access to attendance data and reports from mobile devices for managers and employees on the go. Increased flexibility and convenience for remote or field-based employees.



# MODELLING

1. **Data collection:** Determine the sources of attendance data (e.g., biometric systems, online timesheets).
2. **Data Cleaning:** Identify and correct errors in the data, such as missing entries, duplicates, or incorrect dates/times.
3. **Data Structuring:** Arrange the data into a structured format with appropriate headers (e.g., Employee ID, Date, In-Time, Out-Time).
4. **Adding Columns:** Introduce additional columns for derived metrics like Total Hours Worked, Overtime, or Attendance Status.
5. **Data Analysis Calculations:** Use Excel formulas to calculate key metrics, such as total working hours, attendance percentages, and overtime.
6. **Pivot Tables:** Create pivot tables to summarize data by different categories, such as department, team, or time period. (e.g., peak absenteeism days, average work hours).
7. **Visualization Charts and Graphs:** Develop visual representations of the data using charts like line graphs for trends, for attendance distribution.

# RESULTS



# Conclusion

- Employee attendance analysis is essential for maintaining productivity and ensuring compliance with company policies. By automating attendance tracking and analyzing data, organizations can identify patterns, address issues like absenteeism, and make informed decisions to improve overall efficiency. A reliable attendance analysis system helps create a more engaged and productive workforce, contributing to the organization's success.
- Jane performed attendance rate better than the other employees.