Employee Data Analysis using Excel

STUDENT NAME: SUBHALAKSHMI.D
REGISTER NO.: 312211068
DEPRTMENT: BACHELOR OF COMMERCE OF ARTS AND SCIENCE FOR WOMEN, CHENNAI-28

PROJECT TITLE

EMPLOYEE SALARY 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

- The objective of this analysis is to conduct a comprehensive examination of employee salary distribution across different departments within the company.

- The analysis focuses on understanding the salary structure by evaluating annual salaries, gender distribution, departmental budgets, and employee demographics.

- This will help identify discrepancies, trends, or patterns in compensation, which can inform strategic decisions regarding pay equity, departmental budgeting, and workforce planning.

PROJECT OVERVIEW

- This project analyzes employee salary data to assess compensation trends across different departments.
- It focuses on salary distribution by gender, department, and other demographics,aiming to identify potential disparities.
- The analysis provides insights into departmental budgets and helps inform strategic decisions on pay equity and workforce planning.

WHO ARE THE END USERS?

Human Resources (HR) Team:

To assess pay equity, manage compensation plans, and ensure compliance with labor laws.

Department Managers:

To understand salary distributions within their teams and make informed decisions about budgeting and employee compensation.

Finance Team:

To analyze departmental salary expenditures and assist in budget planning and allocation.

Executives and Leadership:

To gain insights into company-wide compensation trends and make strategic decisions regarding workforce planning and organizational policies.

Diversity and Inclusion Officers:

To monitor and address any disparities in pay related to gender, ethnicity, or other demographics.

OUR SOLUTION AND ITS VALUE PROPOSITION

- Our solution is a comprehensive salary analysis tool built within an Excel sheet. This tool aggregates and analyzes employee data across various departments, offering insights into salary distributions by gender, department, and other key demographics. It also includes departmental budget summaries and highlights any pay disparities or trends that may require attention.

- The value of this solution lies in its ability to provide clear, data-driven insights that support informed decision-making. By using this tool, HR teams, managers, and executives can identify and address pay inequities, optimize departmental budgets, and enhance overall employee satisfaction. It also empowers the organization to maintain fairness and transparency in compensation practices, ultimately leading to a more equitable and motivated workforce.

Dataset Description

1. Employee Data new:
This sheet provides detailed employee information, including:
•**Employee ID, Full Name, Job Title, and Department**:
Identifiers and work details.
•**Business Unit, Gender, Ethnicity, Age, Hire Date, and Exit Date**:
Demographic and employment data.
•**Annual Salary and Bonus %**:
Compensation information.
•**Country and City**:
Location data.

Dataset Description

2. Analysis:
This sheet offers a summarized view of salary data by gender and department. Key columns include:
•**Row Labels**: Departments.
•**Column Labels**: Gender categories.
•**Sum of Annual Salary**: Aggregated salary values by gender.
•**Grand Total**: Total salary per department.
This sheet provides insights into gender-based salary distribution and departmental salary totals.

THE "WOW" IN OUR SOLUTION

Diversity and Inclusion Insights:
Show a breakdown of salaries by gender and ethnicity across different departments. This can highlight the organization's commitment to diversity and equitable compensation.
Compensation Trends and Forecasting:
Use historical data to show trends in salaries over time. You could even project future salary expenditures based on current hiring trends and salary increases, providing strategic foresight.
Performance and Salary
Correlation:
If possible, correlate salary data with performance ratings or bonuses to show how compensation aligns with employee performance.

THE "WOW" IN OUR SOLUTION

Data Visualizations:
Use compelling charts and graphs, such as heat maps, pie charts, or bar graphs, to visualize salary distributions, gender parity, or departmental salary differences. Visualizations make complex data more digestible and impactful.

Salary Benchmarking:
Compare internal salary data with industry standards or competitors (if available). This comparison could reveal if your organization is competitive in attracting and retaining talent.

Predictive Analytics:
If you have enough data, apply predictive analytics to forecast turnover risks based on salary dissatisfaction or identify departments at risk of budget overruns due to rising salary costs.

MODELLING

DATA PREPARATION

ean and standardize ata (remove duplicates, handle missing values, format consistency).

DESCRIPTIVE STATISTICS

lculate the mean, edian, range, and andard deviation for salaries.
Use frequency distributions for salary ranges and departmental data.

CATEGORICAL ANALYSIS

e pivot tables to mmarize salaries by epartment, gender, and job title.
Cross-tabulate variables to explore relationships (e.g., gender vs. salary).

TREND AND PREDICTIVE ANALYSIS

nduct time series nalysis for salary trends.
Develop predictive models to forecast future salary trends.

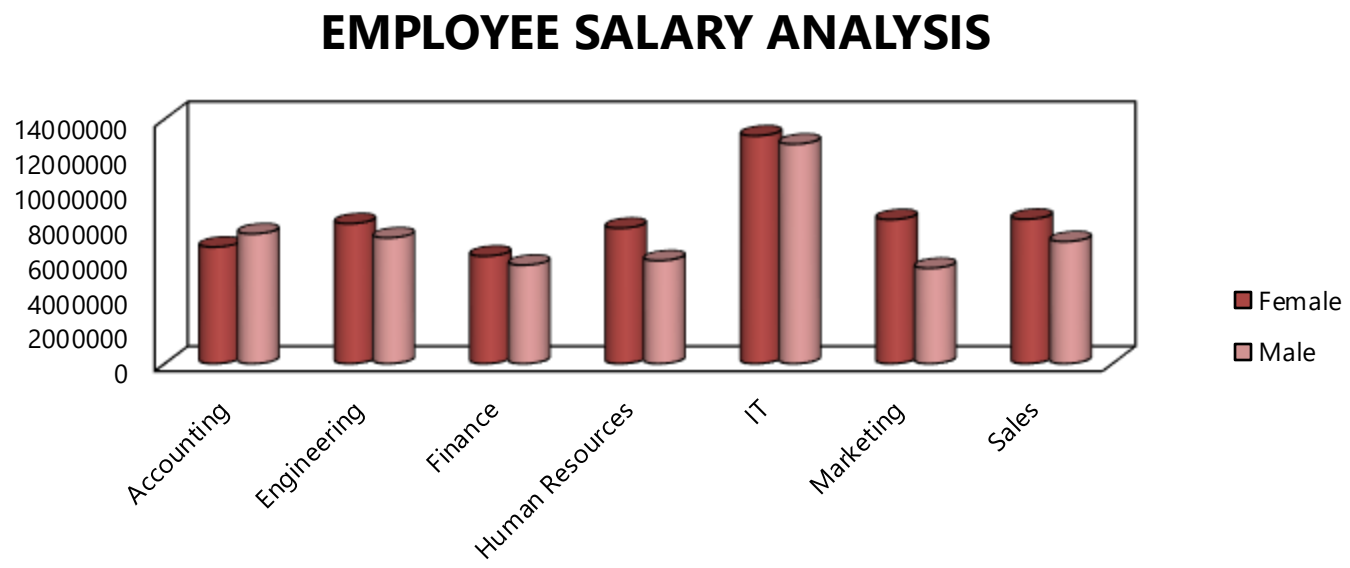
CLUSTERING

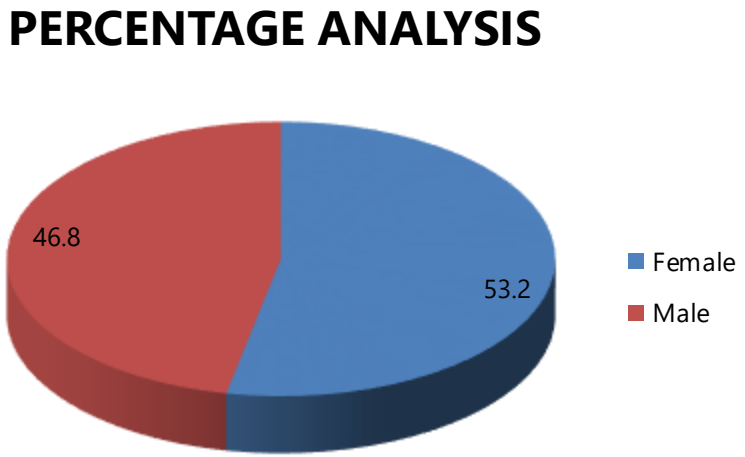
ply clustering chniques to identify employee groups with similar characteristics (e.g., high earners, potential leavers).

BENCHMARKING

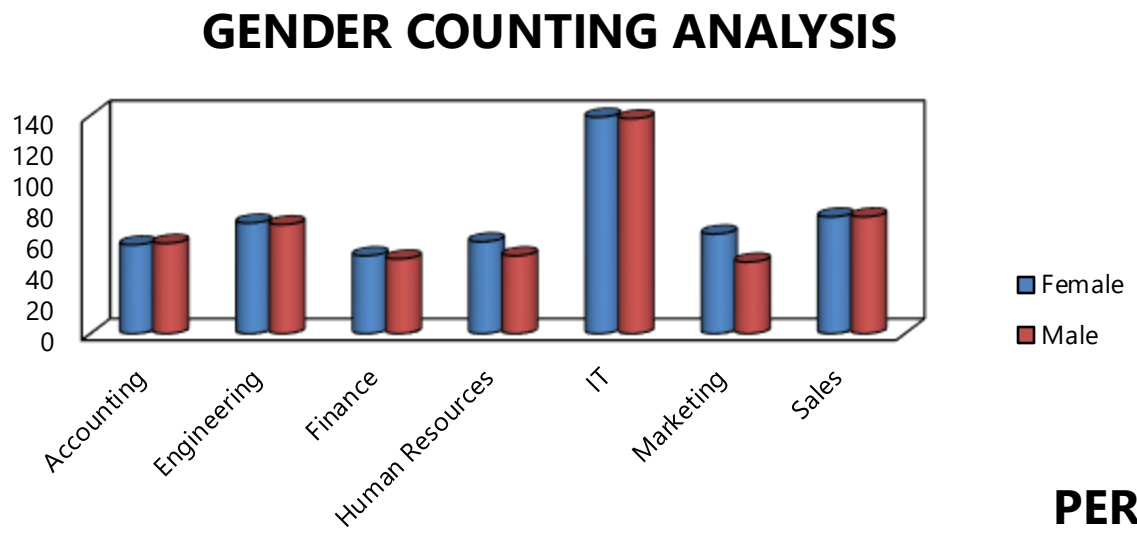
mpare internal salary ata with industry benchmarks to evaluate competitiveness.

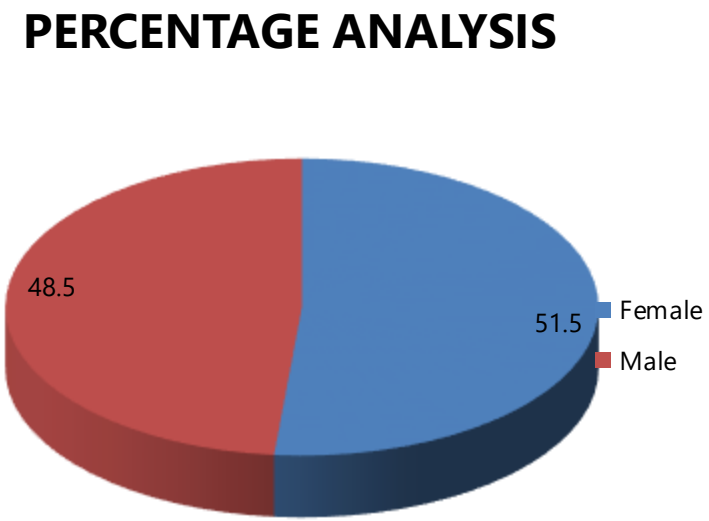
RESULTS


EMPLOYEE SALARY ANALYSIS
14000000
12000000
10000000
8000000
6000000
4000000
2000000
0
Accounting
Engineering
Finance
Human Resources
IT
Marketing
Sales
Female
Male


PERCENTAGE ANALYSIS
46.8
53.2
Female
Male

RESULTS


GENDER COUNTING ANALYSIS
140
120
100
80
60
40
20
0
Accounting
Engineering
Finance
Human Resources
IT
Marketing
Sales
Female
Male


PERCENTAGE ANALYSIS
48.5
51.5
Female
Male

Conclusion

✓ **Salary Distribution**:
The data indicates a significant variance in annual salaries across different departments, with Engineering and Finance having notably high total salaries. This suggests that these departments are either larger or have higher-paid positions compared to others.

✓ **Gender Representation**:
The analysis sheet shows a breakdown of salaries by gender within each department. This can be used to evaluate gender parity in terms of compensation across the organization. Some departments may need a closer look to ensure equitable pay.

✓ **Departmental Insights**:
Certain departments like Engineering and Human Resources show a strong presence in both gender categories, indicating a balanced workforce. However, there may be departments where one gender is underrepresented, which could be an area for improvement in diversity initiatives.