Project no 4

Hiring process analytics

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I. Project Description

In this project we need to focus on the Extracting company Statistics about its hiring process, including hiring expanses and employee salaries and no of hirings and rejections and so on.

Understanding company statistics involves helping in many useful areas which are need to focus to improve the company performance and make a predictable decisions in the future.
In this project we are going to understand the many statistical areas and points to be understand well and answering to the Questions helps to take an informed decisions about its hiring costs and performances.

II. Approach

In the beginning of problem, we are going to understand the companies data by cleaning it, it specially involves the following steps

1. Handling Missing Data: Check if there are any missing values in the dataset. If there are, decide on the best strategy to handle them.
2. Clubbing Columns: If there are columns with multiple categories that can be combined, do so to simplify your analysis.
3. Outlier Detection: Check for outliers in the dataset that may skew your analysis.
4. Removing Outliers: Decide on the best strategy to handle outliers. This could be removing them, replacing them, or leaving them as is, depending on the situation.
5. Data Summary: After cleaning and preparing your data, summarize your findings. This could involve calculating averages, medians, or other statistical measures. It could also involve creating visualizations to better understand the data.

And now we dive into main tasks understanding the problem and finding the statistical answers and Trends throughout the entire data that we have.

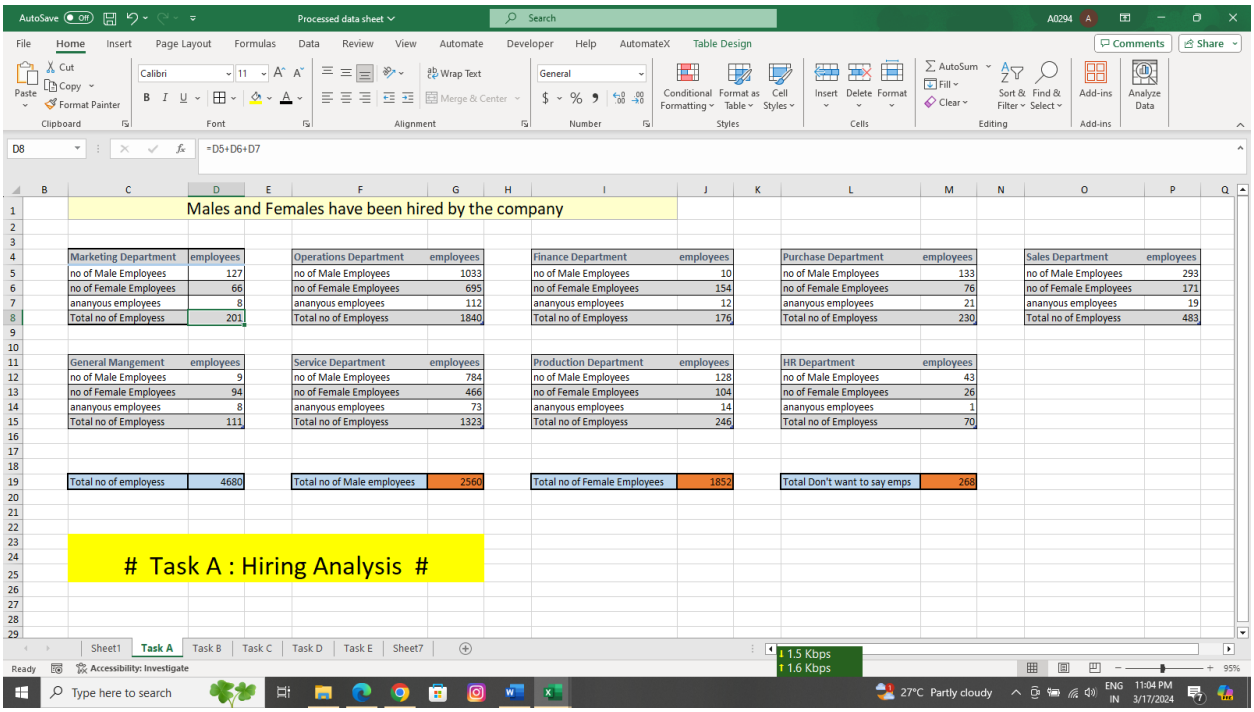
Tasks :

A. Hiring Analysis:

This hiring process involves bringing new individuals into the organization for various roles.

In this project we are going to find the gender distribution of hires. How many males and females have been hired by the company

This is the statistical solution for above problem



Marketing Department	employees
no of Male Employees	127
no of Female Employees	66
ananyous employees	8
Total no of Employess	201

Operations Department	employees
no of Male Employees	1033
no of Female Employees	695
ananyous employees	112
Total no of Employess	1840

Finance Department	employees
no of Male Employees	10
no of Female Employees	154
ananyous employees	12
Total no of Employess	176

Purchase Department	employees
no of Male Employees	133
no of Female Employees	76
ananyous employees	21
Total no of Employess	230

Sales Department	employees
no of Male Employees	293
no of Female Employees	171
ananyous employees	19
Total no of Employess	483

General Mangement	employees
no of Male Employees	9
no of Female Employees	94
ananyous employees	8
Total no of Employess	111

Service Department	employees
no of Male Employees	784
no of Female Employees	466
ananyous employees	73
Total no of Employess	1323

Production Department	employees
no of Male Employees	128
no of Female Employees	104
ananyous employees	14
Total no of Employess	246

HR Department	employees
no of Male Employees	43
no of Female Employees	26
ananyous employees	1
Total no of Employess	70

Total no of employess	4680
Total no of Male employees	2560
Total no of Female Employees	1852
Total Don't want to say emps	268

To extract the above Information we have used some of Excel Statistical formulae like

Countifs():

To find all each gender total number of employees in each department

Sum():

To Find total number of employees in each department

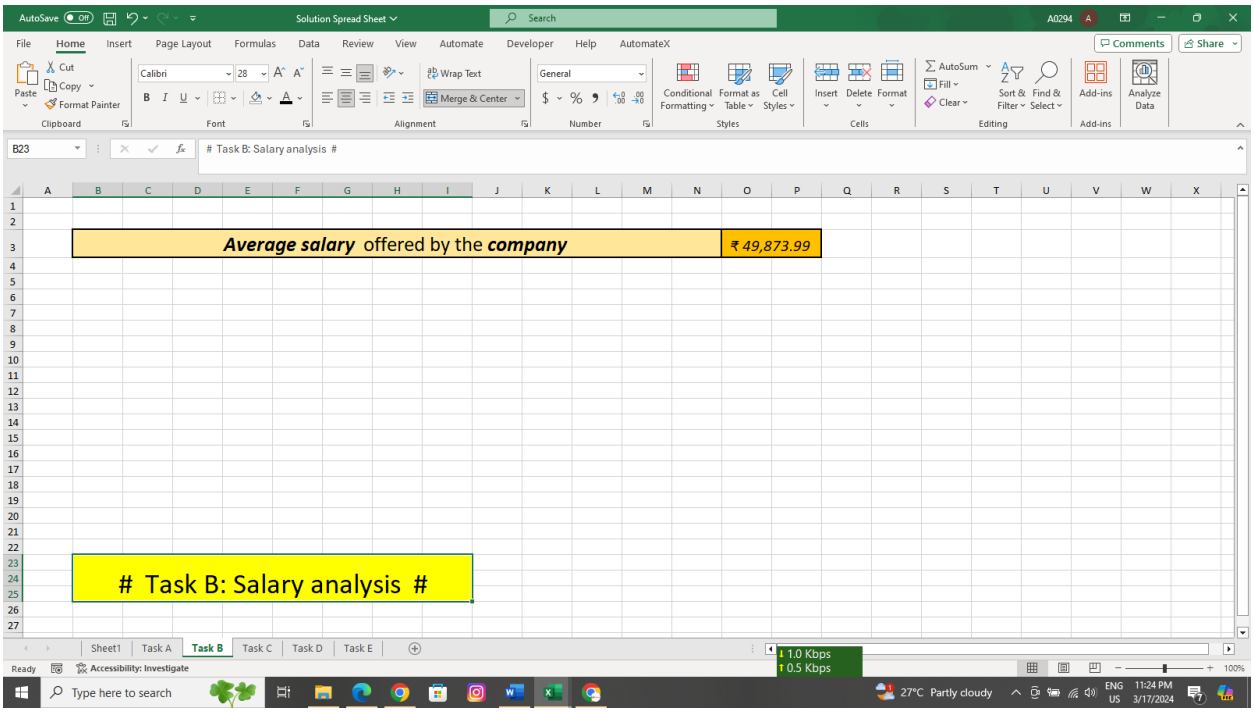
- This is link to Excel Sheet to view, [for the excel sheet click here]

B. Salary Analysis :

This hiring process involves average salary is calculated by adding up the salaries of a group of employees and then dividing the total by the number of employees.

In this project we are going to find average salary offered by this company? Use Excel functions to calculate this.

This is the statistical solution for above problem



To extract the above Information we have used some of Excel Statistical formulae like

AVERAGE():

To find the average salary offered by the company, in statistical terms it is called as mean.

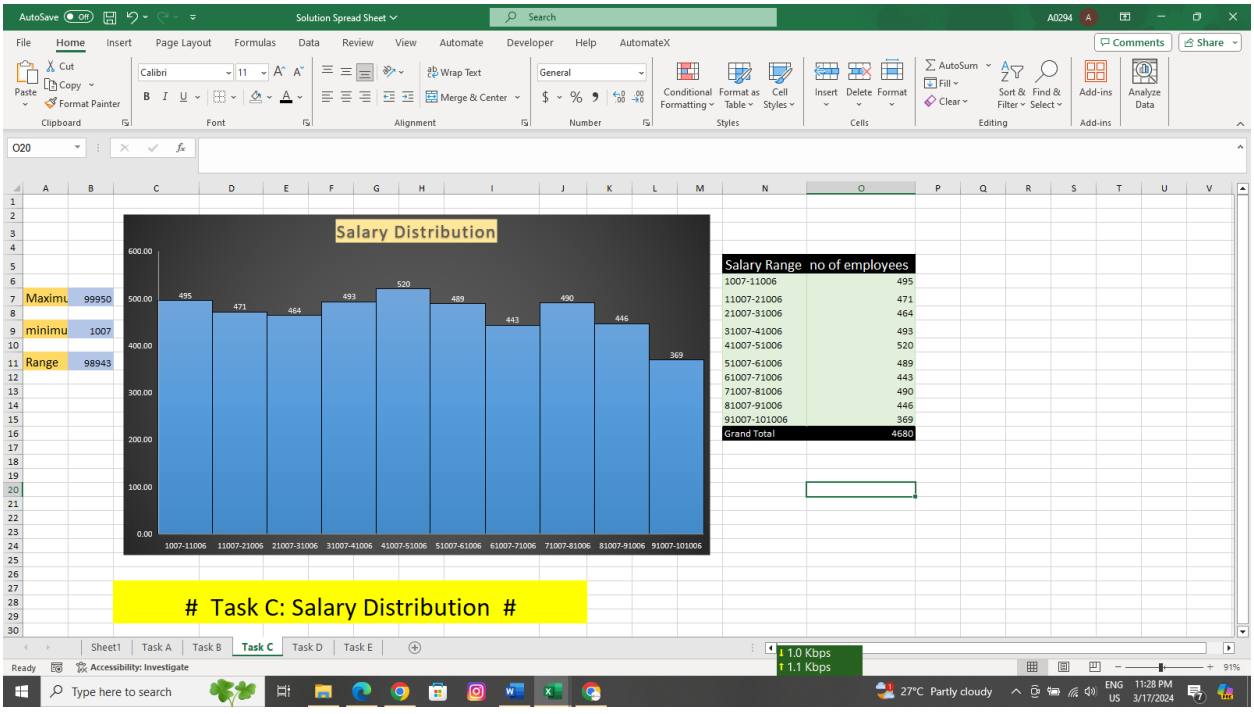
- This is link to Excel Sheet to view, [for the excel sheet click here]

C. Salary Distribution:

This hiring process involves Class intervals represent ranges of values, in this case, salary ranges. The class interval is the difference between the upper and lower limits of a class.

In this project we are going to Create class intervals for the salaries in the company. This will help you understand the salary distribution.

This is the statistical solution for above problem with Screen shot.



To extract the above Information we have used some of Excel Statistical formulae like

Maximum():

To get maximum salary from the range

Minimum():

To get minimum salary for the range of salary

Pivot Tables():

To get understanding about how they are interlinked.

- This is link to Excel Sheet to view, for the excel sheet click here

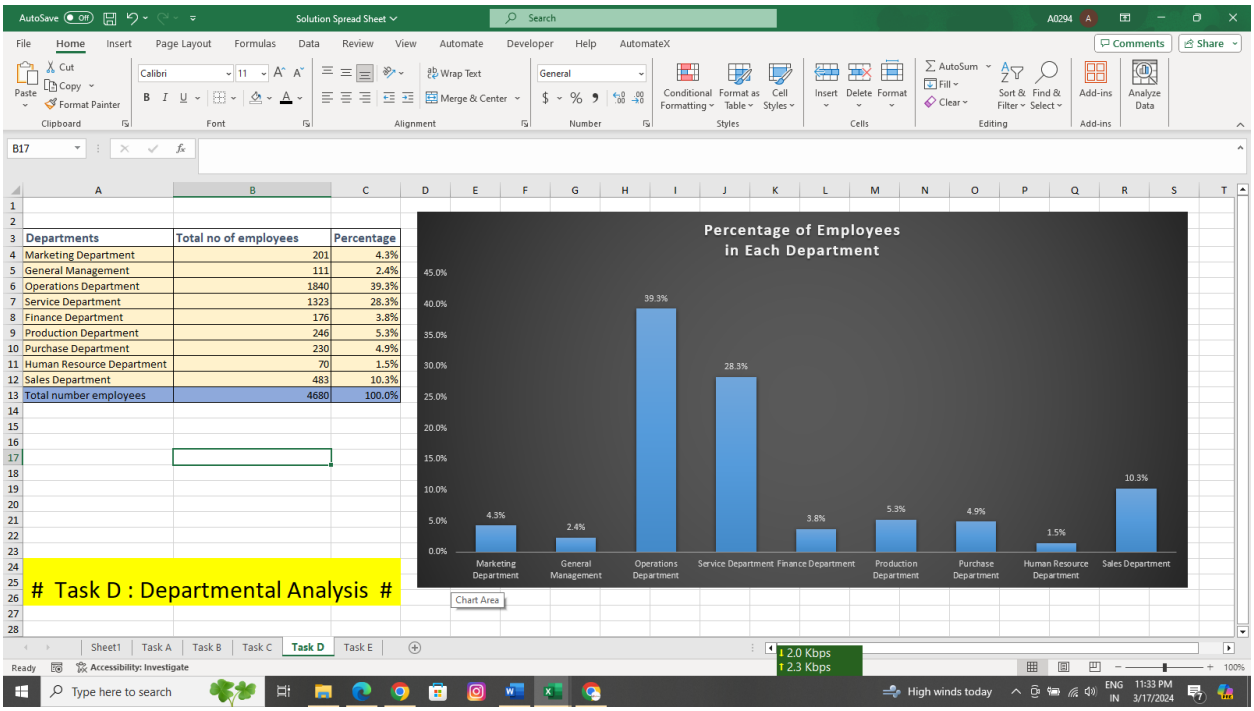
D. Departmental Analysis:

This hiring process involves Visualizing data through charts and plots is a crucial part of data analysis.

In this project we are going to Use a pie chart, bar graph, or any other suitable visualization to show the proportion of people working in different departments.

This is the statistical solution for above problem with Screen shot.

- This is link to Excel Sheet to view, for the excel sheet click here



Departments	Total no of employees	Percentage
Marketing Department	201	4.3%
General Management	111	2.4%
Operations Department	1840	39.3%
Service Department	1323	28.3%
Finance Department	176	3.8%
Production Department	246	5.3%
Purchase Department	230	4.9%
Human Resource Department	70	1.5%
Sales Department	483	10.3%
Total number employees	4680	100.0%

To extract the above Information we have used some of Excel Statistical formulae like

Unique()

To get all departments from the data

Countif()

To get count of each department employees

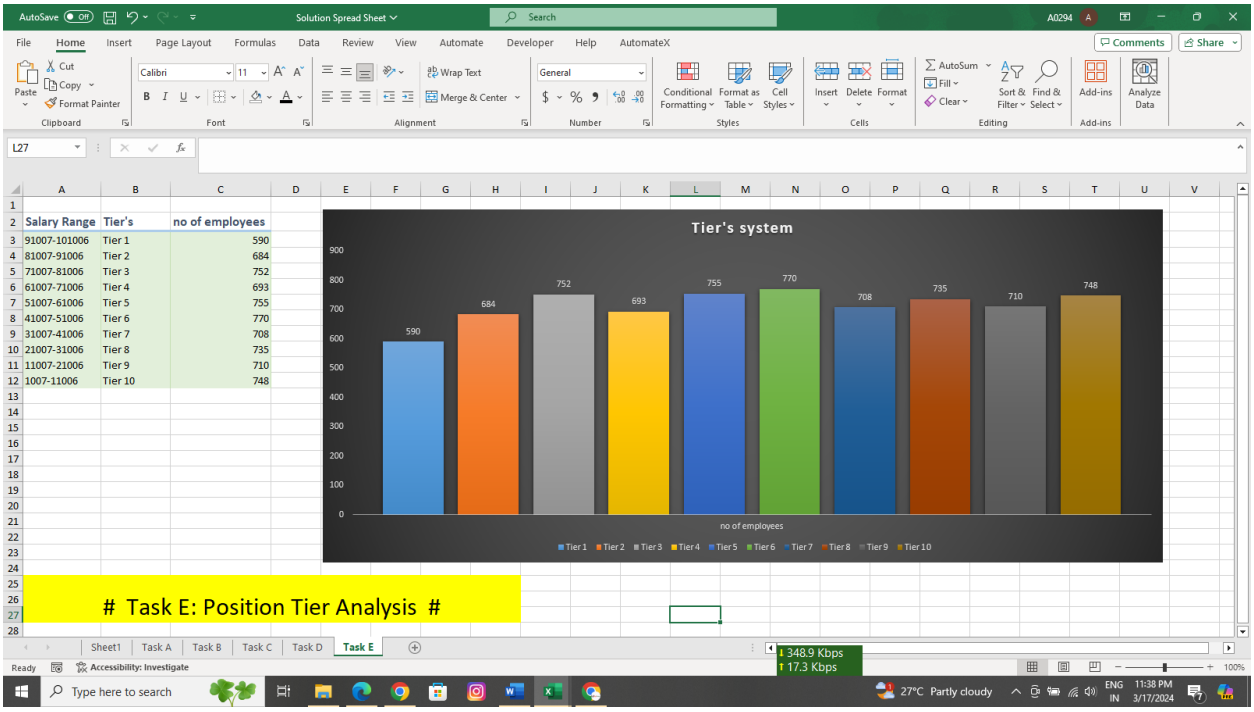
- This is link to Excel Sheet to view, [for the excel sheet click here]

E. Position Tier Analysis

This hiring process involves finding Different positions within a company often have different tiers or levels.

.In this project we are going to Use a chart or graph to represent the different position tiers within the company. This will help you understand the distribution of positions across different tiers.

This is the statistical solution for above problem with Screen shot.



Salary Range	Tier's	no of employees
91007-101006	Tier 1	590
81007-91006	Tier 2	684
71007-81006	Tier 3	752
61007-71006	Tier 4	693
51007-61006	Tier 5	755
41007-51006	Tier 6	770
31007-41006	Tier 7	708
21007-31006	Tier 8	735
11007-21006	Tier 9	710
1007-11006	Tier 10	748

To extract the above Information we have used some of Excel Statistical formulae like

Maximimu()

To get maximum salary range

Minimum()

To get minimum salary range

Pivot tables

To get insights of salary ranges

- This is link to Excel Sheet to view, for the excel sheet click here

III. Tech-Stack used

In this Project we have used the

Software's:

Microsoft Excel 2019
Windows 10

Hardware's:

8 gb ram
256 ssd

IV. Insights

In this project we have got the Insights for the given Problems

Task A:
The Ratio between the woman and man is almost near to each other, there is only a small difference between them.

Task B:

The average Salary is offered by the company for each employee is 49.873.99 respectively

Task C:
The salary distribution of every employees are near to each other, like the employees are almost all same in each range

Task D:
Each Departments has a bunch of employees but, the Operations and service departments contributes highest share amongst them.

Task E:
There are several kind of range salaries, and compare first tier they are smaller in range but higher in no of employees.

V. Results

Finally these results are helpful to understand many insights about the hiring process and the employees salaries and make predictions.