Name: Nitika **Project Topic: Hiring Process Analytics** **Project No.: 4**

Trainity Project 4: Hiring Process Analytics

❖ **Project Description:**

As per the initial project report, I have been assigned the role of Lead Data Analyst to perform Hiring Process Analytics on the given recruitment dataset. There are some questions being asked to be analysed which helps in understanding the hiring processes of the company such as number of job vacancies, revenue being spent on new recruit's salaries etc. Analysing such components help the company to make better decisions related to hiring. The questions to be analysed and gain insights from are:

A. **Hiring:** Process of intaking of people into an organization for different kinds of positions.

Your task: How many males and females are Hired?

B. **Average Salary:** Adding all the salaries for a select group of employees and then dividing the sum by the number of employees in the group.

Your task: What is the average salary offered in this company?

C. **Class Intervals:** The class interval is the difference between the upper-class limit and the lower class limit.

Your task: Draw the class intervals for salary in the company?

D. **Charts and Plots:** This is one of the most important parts of analysis to visualize the data.

Your task: Draw Pie Chart / Bar Graph (or any other graph) to show proportion of people working different department?

E. **Charts:** Use different charts and graphs to perform the task representing the data.

Your task: Represent different post tiers using chart/graph?

❖ **Approach**

To perform the required tasks and complete the project, I have used Microsoft Excel 365 to load the given dataset and apply the appropriate formulas, functions and charts which includes Tables, PivotTables, Statistical formulas such as count, average and finally - charts & graphs to visualize the achieved results. For EDA process, the steps I followed are:

1. Understanding data columns and data
2. Checking for missing data
3. Clubbing columns with multiple categories
4. Checking for outliers
5. Removing outliers
6. Drawing Data Summary

❖ **Tech Stack Used**

1. Microsoft Excel (Office 365) – For the major analysis & visualization processes
2. Microsoft Word (Office 365) – For documentation

❖ **Insights**

- Data Quality Matters:

Addressing missing values systematically is crucial for maintaining data integrity and ensuring a reliable analysis of the hiring process.

- Streamlined Analysis Pays Off:

Simplifying the dataset by consolidating columns enhances clarity, making it easier to identify patterns and outliers that impact hiring trends.

- Excel Empowers Informed Decision-Making:

Microsoft Excel 2022's robust analytical features proved instrumental in generating meaningful insights, allowing for data-informed recommendations to improve the company's hiring process.

Dataset: -

	A	B	C	D	E	F	G
1	application_id	Interview Taken or	Status	event_name	Department	Post Name	Offered Salary
2	383422	5/1/14 11:40	Hired	Male	Service Department	c8	56553
3	907518	5/6/14 8:08	Hired	Female	Service Department	c5	22075
4	176719	5/6/14 8:08	Rejected	Male	Service Department	c5	70069
5	429799	5/2/14 16:28	Rejected	Female	Operations Department	i4	3207
6	253651	5/2/14 16:32	Hired	Male	Operations Department	i4	29668
7	289907	5/1/14 7:44	Hired	Male	Sales Department	-	85914
8	959124	5/6/14 16:27	Rejected	Male	Sales Department	i7	69904
9	86642	5/9/14 13:17	Rejected	Male	Sales Department	i7	11758
10	751029	5/2/14 13:09	Hired	Female	Service Department	i4	15156
11	434547	5/2/14 13:11	Rejected	Female	Service Department	i4	49515
12	518854	5/1/14 9:00	Rejected	Male	Service Department	n10	26990
13	649039	5/7/14 10:48	Hired	Female	Service Department	b9	200000
14	199526	5/7/14 10:50	Hired	Male	Service Department	b9	86787
15	539803	5/15/14 9:31	Hired	Male	Finance Department	b9	2308
16	191009	5/9/14 12:48	Hired	Female	Service Department	i7	56688
17	195323	5/9/14 12:48	Hired	-	Service Department	i7	81757
18	51318	5/2/14 8:07	Hired	Male	Service Department	i5	15134
19	742283	5/2/14 8:11	Rejected	-	Service Department	i5	100
20	513166	5/1/14 22:53	Hired	Female	Operations Department	i1	73579
21	791372	5/1/14 22:54	Rejected	Male	Operations Department	i1	50351
22	47857	5/1/14 22:55	Rejected	Female	Operations Department	i1	38462
23	834101	5/1/14 22:53	Rejected	Don't want to say	Operations Department	i1	82510
24	985008	5/1/14 9:41	Rejected	Male	Service Department	i6	52554
25	891568	5/1/14 16:28	Hired	Female	Operations Department	i7	3423

A. Hiring: Process of intaking of people into an organization for different kinds of positions.

Your task: How many males and females are Hired?

Gender	Number of Person Hired	Formula
Male	2563	=COUNTIFS(D:D,"Male",C:C, "Hired")
Female	1856	=COUNTIF(D:D, "Female",C:C, "Hired")

Here we have counted the number of event_name according to the conditions given i.e. Hired-Male, Hired-Female. I have simply used the count-ifs function.

Basically, here we got an analysis that the total number of males hired is 2563 and the total number of females hired is 1856.

B. Salary Analysis: - What is the average salary offered in this company?

Salary	Amount	Formula
Minimum salary	100	=MIN(G:G)
Maximum Salary	400000	=MAX(G:G)
Average Salary	49983.03	=AVERAGE(G:G)

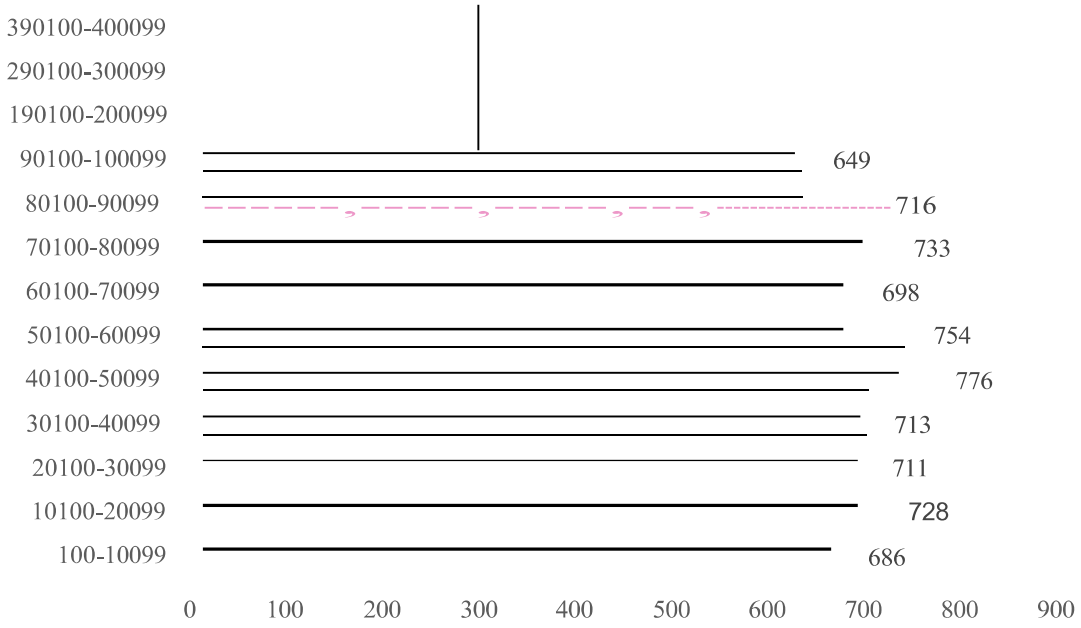
Here we have counted the number of employees (hired + rejected) and then took out a summation of all the salaries of the employees and divide it by the total number of employees. Using the average function, we can do this very easily.

After this calculation, it was found that the average salary offered to the employees in the company is Rs. 49983.03.

C. Salary Distribution: - Create class intervals for salary distribution in the company.

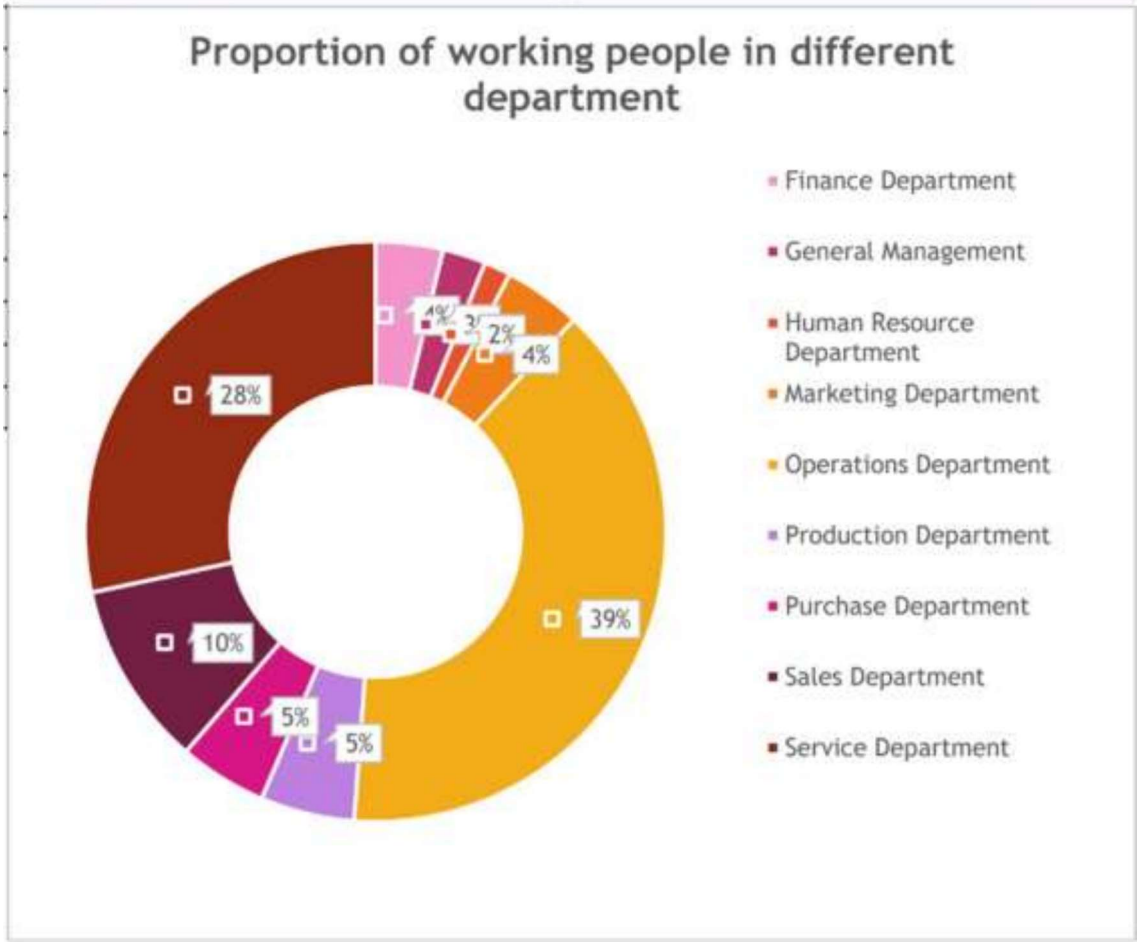
Class Intervals	Number of Salary
100-10099	686
10100-20099	728
20100-30099	711
30100-40099	713
40100-50099	776
50100-60099	754
60100-70099	698
70100-80099	733
80100-90099	716
90100-100099	649
190100-200099	1
290100-300099	1
390100-400099	1
Grand Total	**7167**

Frequency of Salary for Class Interval



D. Departmental Analysis: - Use a pie chart, bar graph, or any other suitable visualization to show the proportion of people working in different departments.

Departments	Number of people working
Finance Department	176
General Management	113
Human Resource Department	70
Marketing Department	202
Operations Department	1843
Production Department	246
Purchase Department	230
Sales Department	485
Service Department	1332

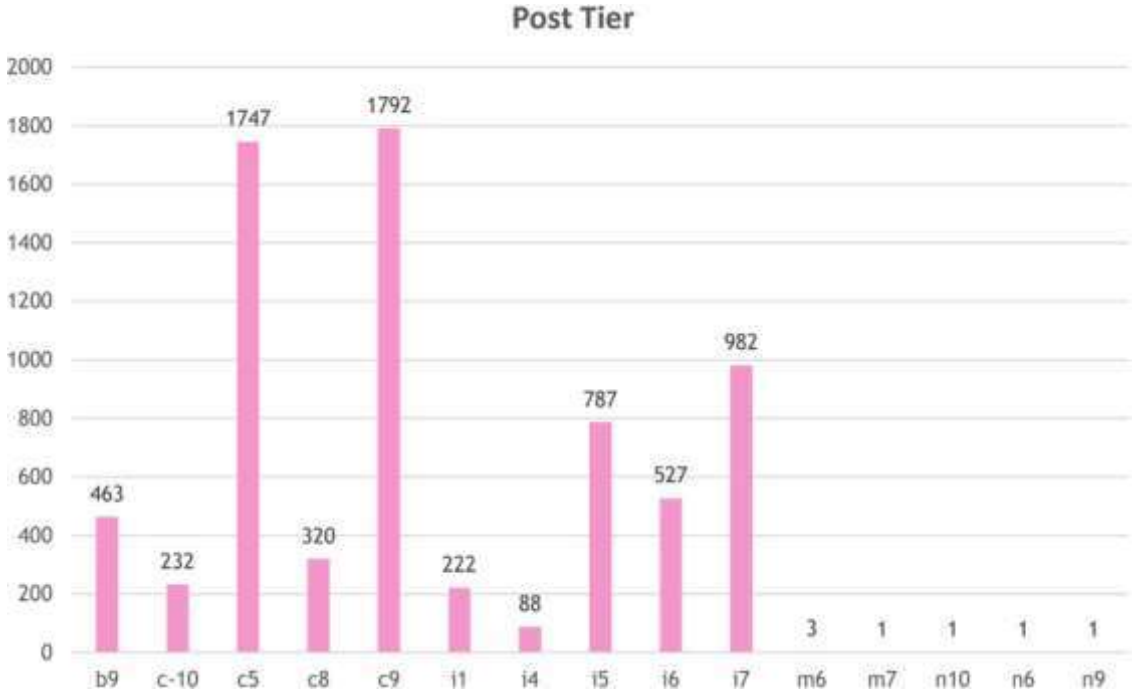


Here, we have created a pivot table showing the different departments and the count of people in different departments. Then we basically focused on making a chart that visualized the scattered proportion of the people.

Here we can see that the biggest proportion of the people are there in the Operations Department and Service Departments.

E. Position Tier Analysis: - Different positions within a company often have different tiers or levels.

Post Name	Count of Post Name
b9	463
c-10	232
c5	1747
c8	320
c9	1792
i1	222
i4	88
i5	787
i6	527
i7	982
m6	3
m7	1
n10	1
n6	1
n9	1

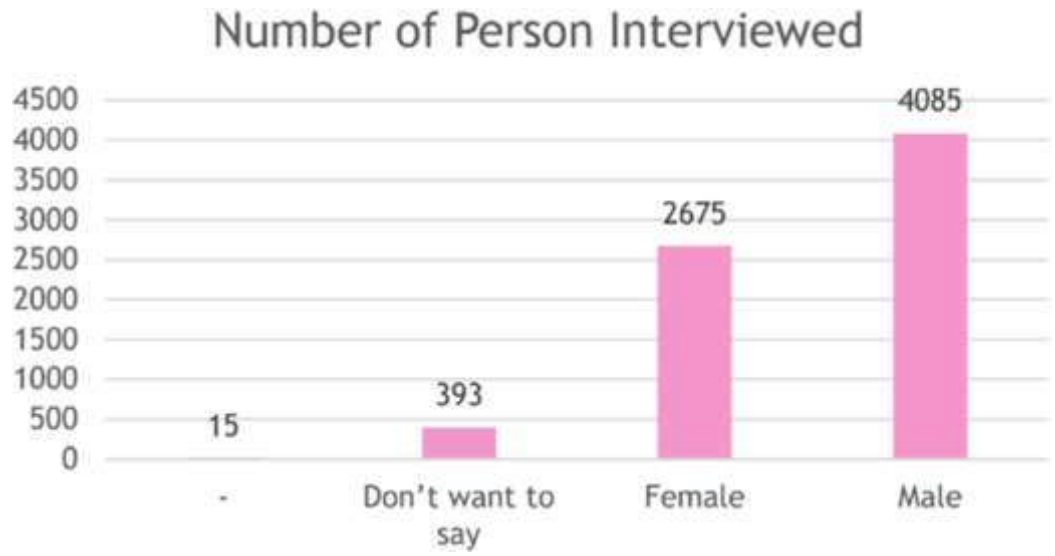


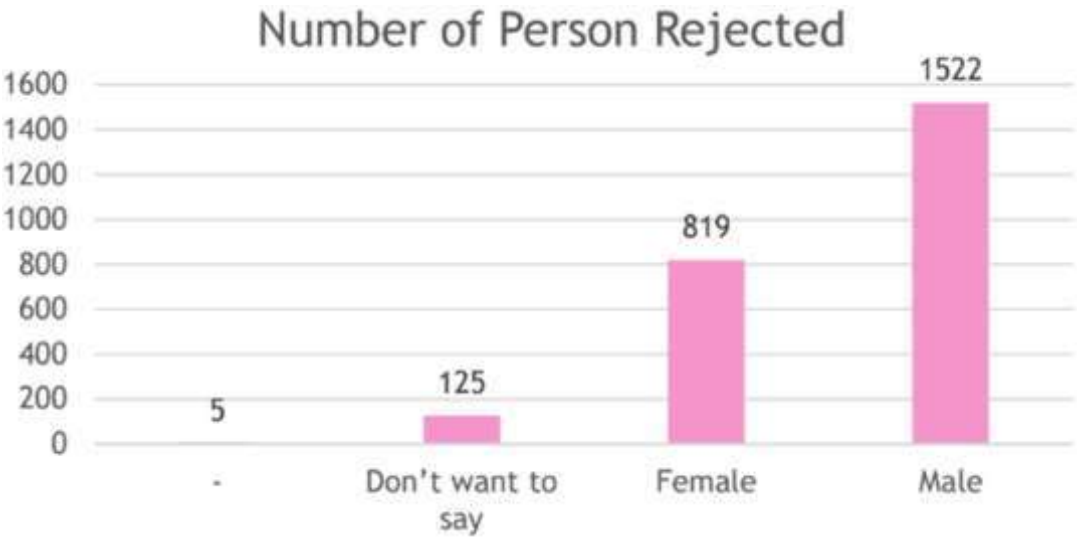
Here, we have created a pivot table related to all the post names and counted how many are there in

those posts, and eventually created a pie chart for the same. And can now clearly see the chart/graph which we can distinguish accordingly.

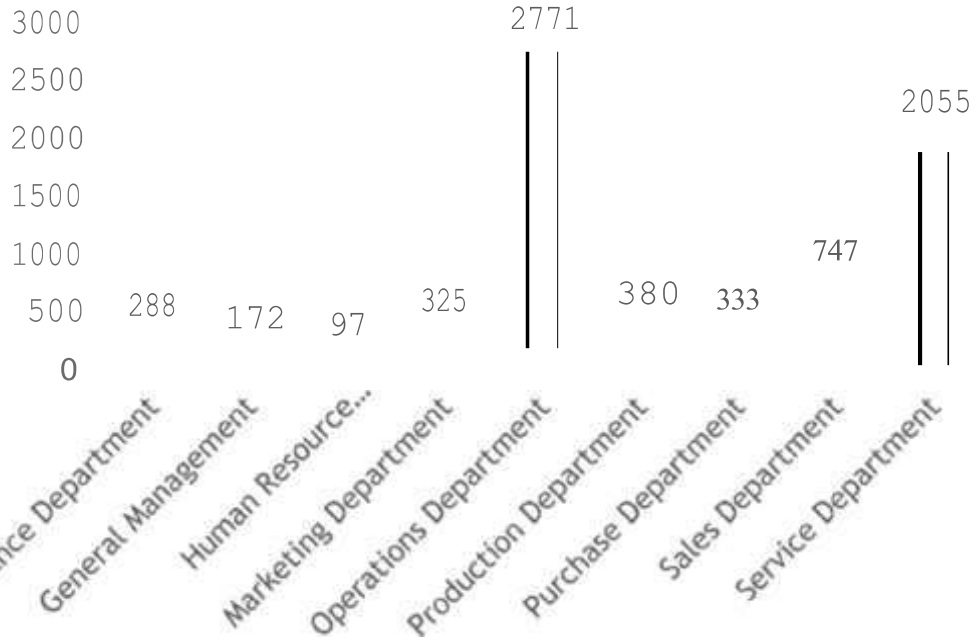
After the visualization, we can see C5 and N9 posts are occupying the majority section of the pie chart.

Exploratory Data Analysis: -





Number of Person Interviewed In Departments



Average Salary in each Department

Results: By leveraging Excel's data analysis functionalities, this project yielded valuable insights into critical facets of the hiring process. Through meticulous data cleaning, outlier identification, and the creation of statistical summaries, a deeper understanding of interview patterns, rejection factors, and job vacancy trends was achieved. These insights not only empower data-driven decision-making in the hiring department but also set the stage for potential enhancements in the overall hiring procedure.