Hiring Process Analytics

Description:

Hiring process is the fundamental and the most important function of a company. Here, the MNCs get to know about the major underlying trends about the hiring process. Trends such as- number of rejections, number of interviews, types of jobs, vacancies etc. are important for a company to analyse before hiring freshers or any other individual. Thus, making an opportunity for a Data Analyst job here too!

Being a Data Analyst, your job is to go through these trends and draw insights out of it for hiring department to work upon.

You are working for a MNC such as Google as a lead Data Analyst and the company has provided with the data records of their previous hirings and have asked you to answer certain questions making sense out of that data.

You are required to provide a detailed report for the below data record mentioning the answers of the questions that follows:

You are given a dataset of a company where the details about people who registered for a particular post in a department of this company. You are required to use your knowledge in statistics and use different formulas in excel and draw necessary conclusions about the company.

Use the below **Steps for EDA**

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

After downloading the dataset, use Excel or Google Sheets to answer the below questions:

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 part 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?

A. Hiring:

To know how many males and females are hired, we can create a **pivot table** , with Statues under rows , Event name under columns and Sum of number of hired in the values, so that we will get the below output as 2562 Females were hired and 1856 males were hired.

OUTPUT OF PIVOT TABLE:

Sum of No. of Hired	Column Labels		
Row Labels	Female	Male	Grand Total
Hired	2562	1856	4418
Grand Total	**2562**	**1856**	**4418**

We can also use countifs function of excel to count the number of males and females hired . the Formula is :

i. For Females :

=COUNTIFS(C2:C7169,"Hired",D2:D7169,"Female")

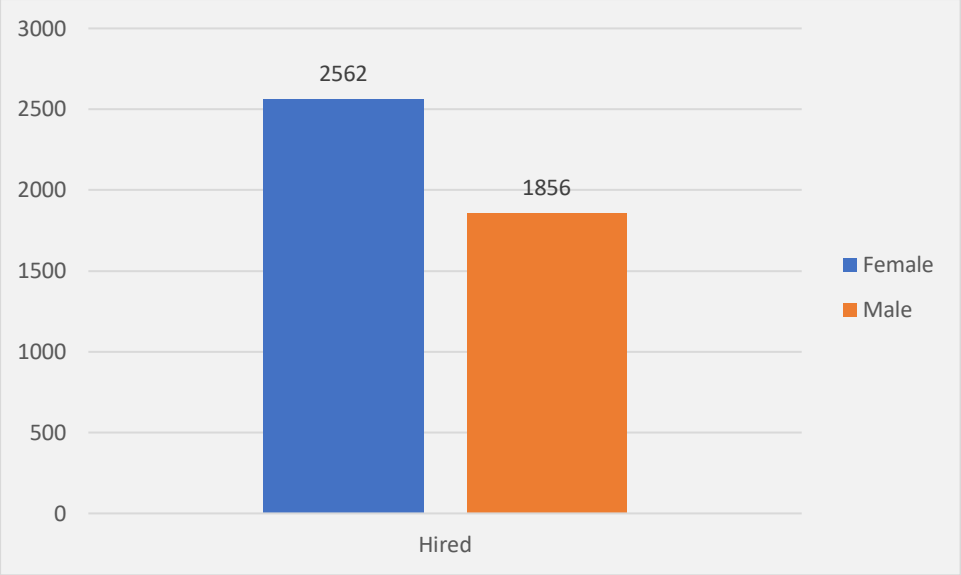
ii. For Males :

=COUNTIFS(C2:C7169,"Hired",D2:D7169,"Male")

OUTPUT OF ABOVE FUNCTIONS**:**

	No. of Hired
Females	1856
Males	2562

If we draw a Bar graph for this , we will get as below:



B. Average Salary :

To calculate average of salary , we have predefined function in Excel. That is: Average () . By using that function , we can give the range if data in the function as parameter to calculate the average of that particular data range.

Formula used:

=AVERAGE(G:G)

OUTPUT:

AvgSalary
49983.02902

As we can observe in the given data, we have outliers for salary . So when we remove the outliers i.e., **Salary <1000** and **Salary >= 200000**, we get the below value.

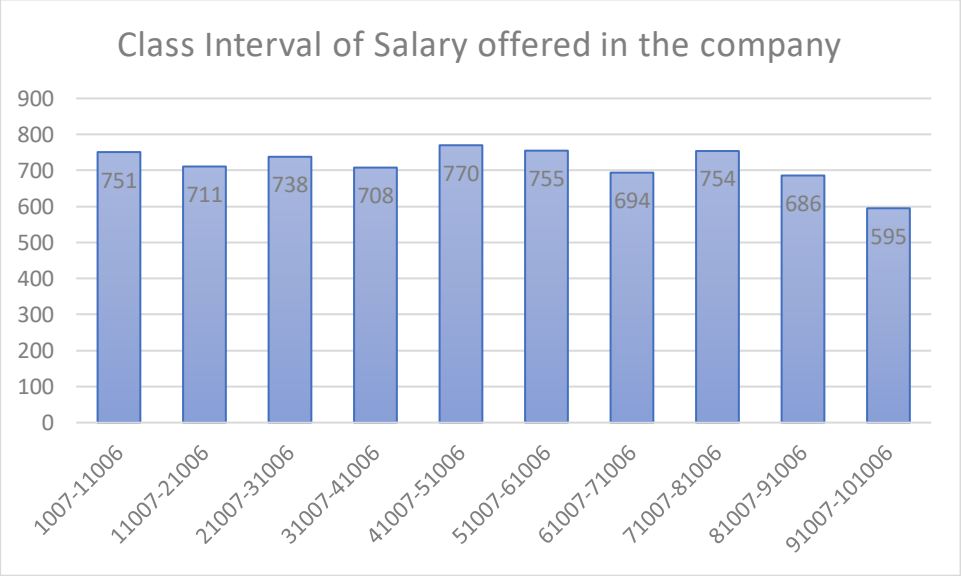
AvgSalary
49892.13474

C. Class Intervals :

For Calculating class intervals , we can create a Pivot table with Offered Salary under rows and Num of posts under values, and grouping the Salary by 10000 i.e class interval, we will get the below table .

Salary Range	Num of posts
1007-11006	751
11007-21006	711
21007-31006	738
31007-41006	708
41007-51006	770
51007-61006	755
61007-71006	694
71007-81006	754
81007-91006	686
91007-101006	595
Grand Total	**7162**

And if we draw a bar graph , we get below graph.



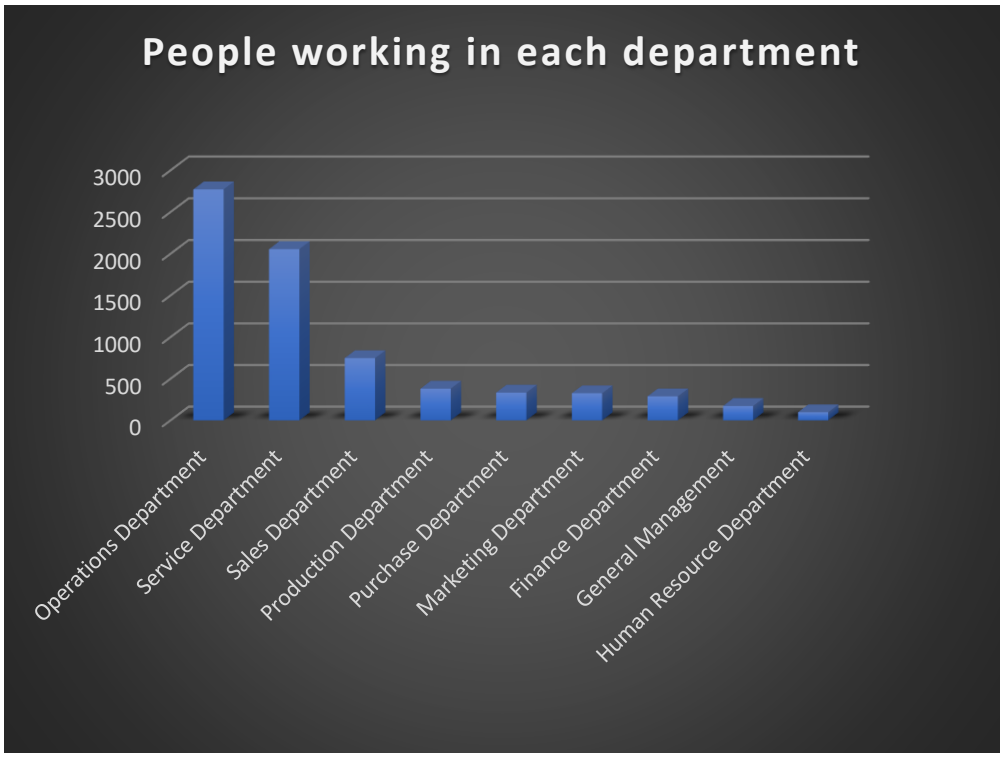
D. Charts and Plots :

To proportion of people working different department , We can use Pivot table , with Department under rows and Count of application ID in the values.

We will get the below table .

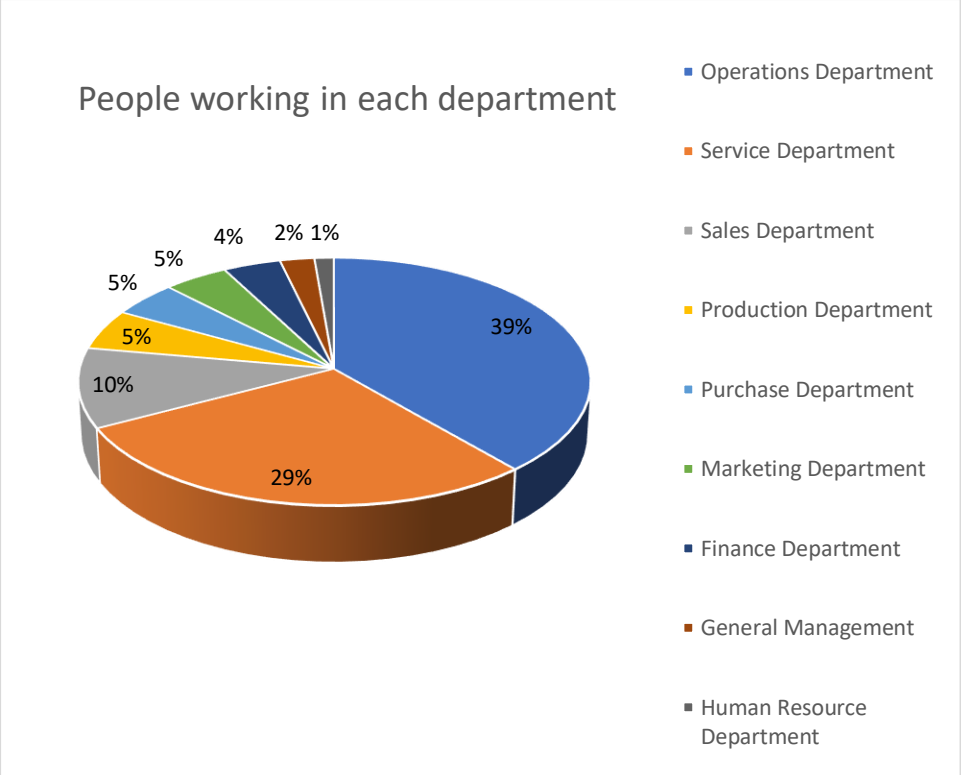
Department	Num of people working
Operations Department	2771
Service Department	2055
Sales Department	747
Production Department	380
Purchase Department	333
Marketing Department	325
Finance Department	288
General Management	172
Human Resource Department	97
Grand Total	**7168**

And if we draw the bar graph, we get below graph.



Pie Chart :

In Pie chart we can see the percentage of people working in each department .

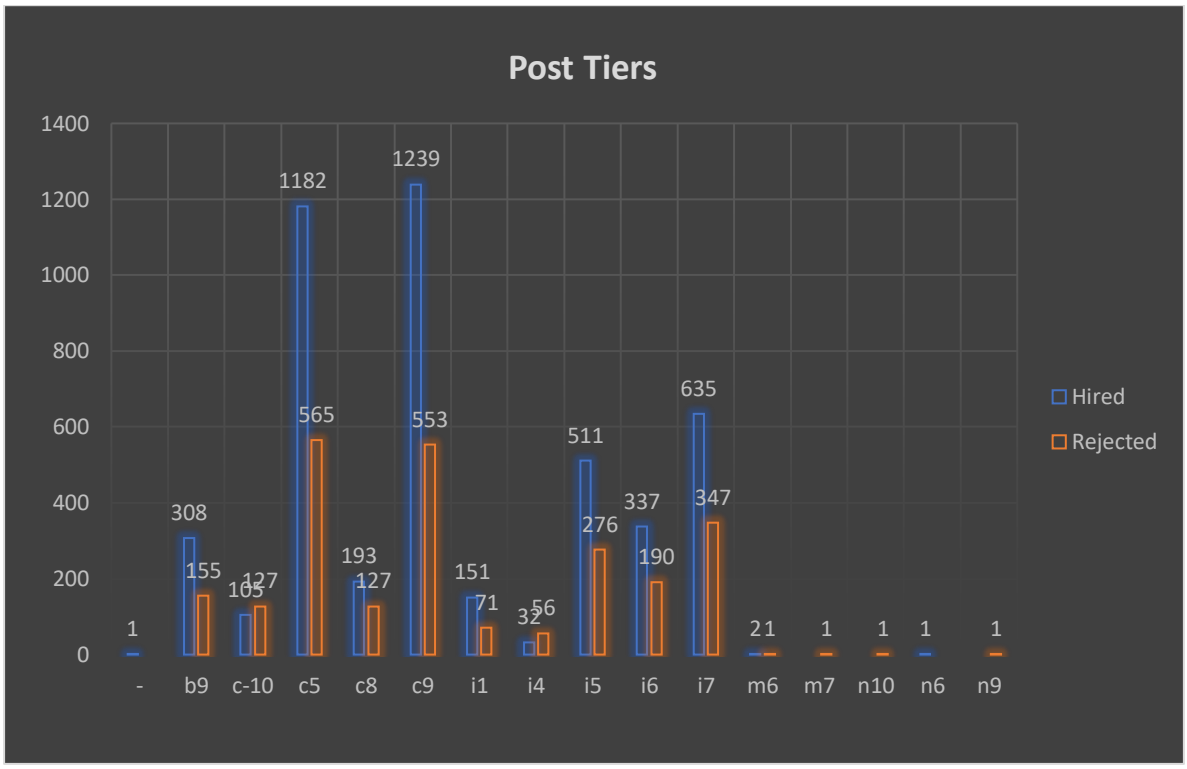


E. Charts :

To Represent different post tiers, We can use pivot table with Status under columns, Post name under rows, Count of application ID under Values, we get below table.

Count of application_id	Status		
Post Name	Hired	Rejected	Grand Total
-	1		1
b9	308	155	463
c-10	105	127	232
c5	1182	565	1747
c8	193	127	320
c9	1239	553	1792
i1	151	71	222
i4	32	56	88
i5	511	276	787
i6	337	190	527
i7	635	347	982
m6	2	1	3
m7		1	1
n10		1	1
n6	1		1
n9		1	1
Grand Total	**4697**	**2471**	**7168**

When we draw a bar graph , we will get the below graph.



Line Graph :