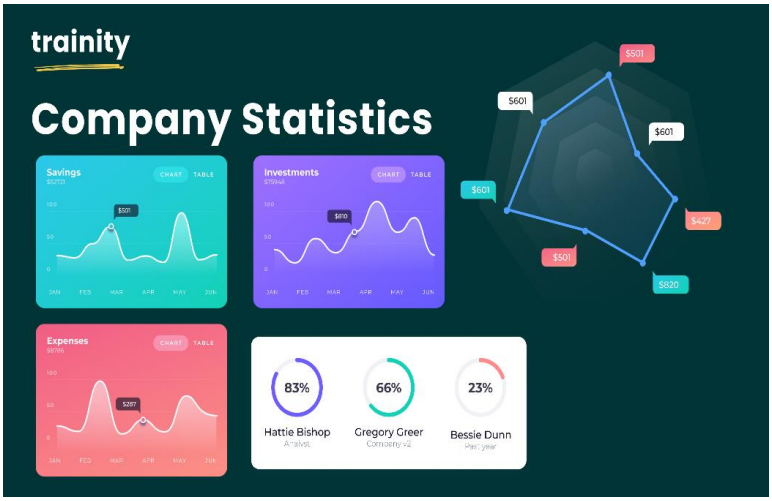
Hiring Process Analytics

(Project-4)



Project Description: The hiring process is a company's most fundamental and crucial activity. MNCs learn about the major underlying trends in the hiring process here. Trends such as the number of rejections, interviews, job kinds, openings, and so on are critical for a company to consider before recruiting freshers or any other individual. As a Data Analyst, our goal is to sift through these trends and extract insights for the hiring department to work with. We work as a lead Data Analyst for a multinational corporation such as Google, and the company has provided us with data records from past hires and has requested us to answer certain questions based on that data.

We will employ EDA to generate various insights and to respond to the company's questions. Exploratory Data Analysis (EDA) is a method of analysing data that employs visual tools. It is used to detect trends, patterns, or to validate assumptions using statistical summaries and graphical representations.

Steps for EDA:

- Understanding data columns and data
- Checking for missing data
- Clubbing columns with multiple categories
- Checking for outliers
- Removing outliers
- Drawing Data Summary

We will also use our knowledge in statistics and use different formulas in excel and draw necessary conclusions about the company.

The things that we are going to find out through this project are:

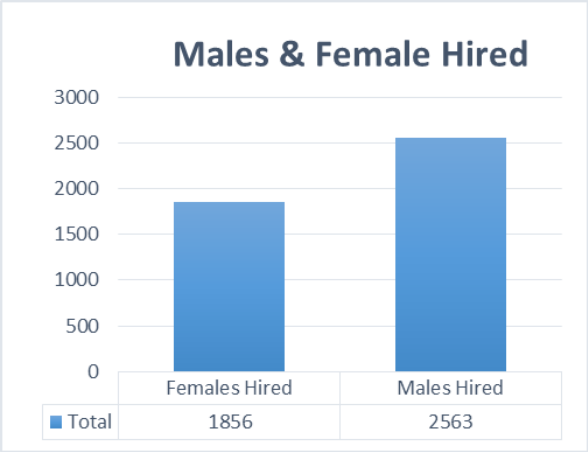
- **Hiring:** How many males and females are hired?
- **Average Salary:** What is the average salary offered in this company?
- **Class Intervals:** Draw the class intervals for salary in the company?
- **Charts and Plots:** Draw Pie Chart / Bar Graph (or any other graph) to show proportion of people working different department?
- **Charts:** Represent different post tiers using chart/graph?

Approach: The dataset given by the company contains the details about people who registered for a particular post in a department of this company. I used MS Excel to analyse the data with different tables and columns.

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

A. **Hiring:** Process of in taking of people into an organization for different kinds of positions.
Task 1: How many males and females are hired?

- Total number of males hired = 2563
- Total number of females hired = 1856
- Formula Used (Male) = COUNTIFS(B:B,"Male",A:A,"Hired")
- Formula Used (Female) = COUNTIFS(B:B,"Female",A:A,"Hired")



Hired	Sum of No. of people hired
Females Hired	1856
Males Hired	2563
Grand Total	**4419**

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.
Task 2: What is the average salary offered in this company?

- The average salary offered in this company is Rs. 49,983 (approx. 50K)
- Formula Used = AVERAGE(A:A)

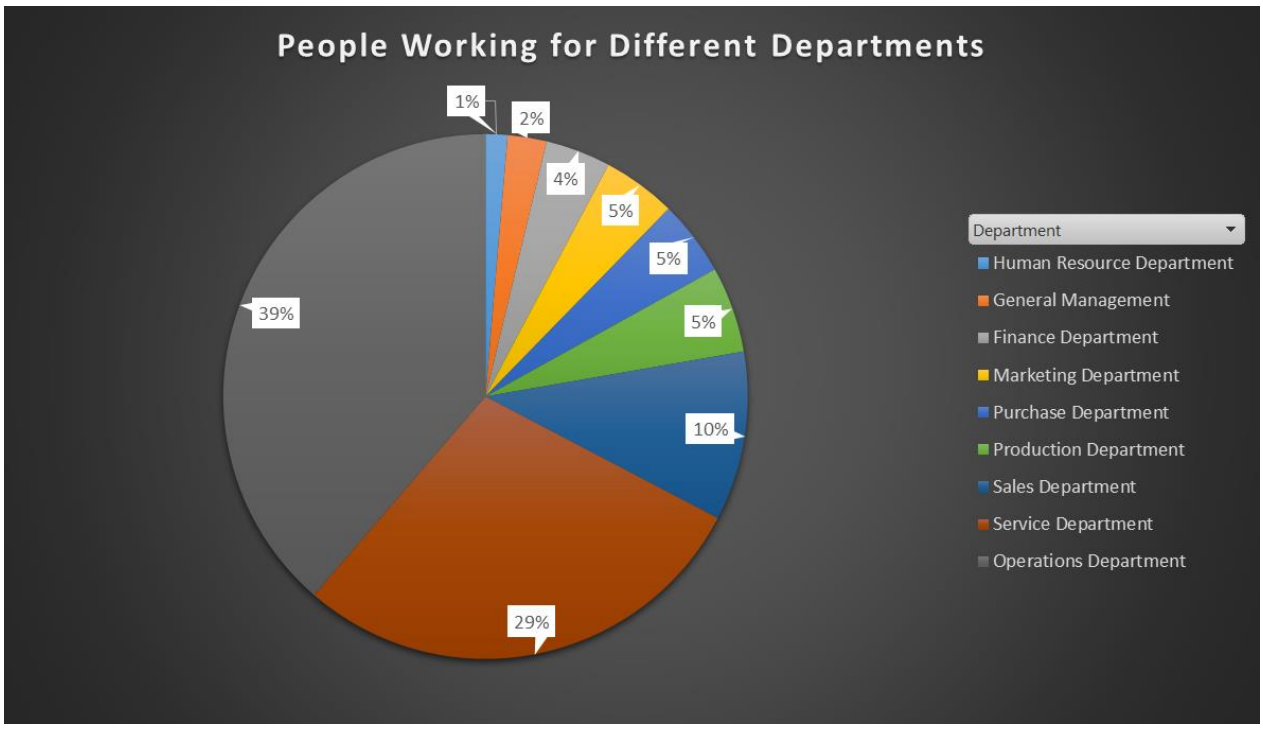
Average Salary Offered	**49,983.0290**
Median Salary	**49,625.0000**
Minimum Salary	**100.0000**
Maximum Salary	**400,000.0000**

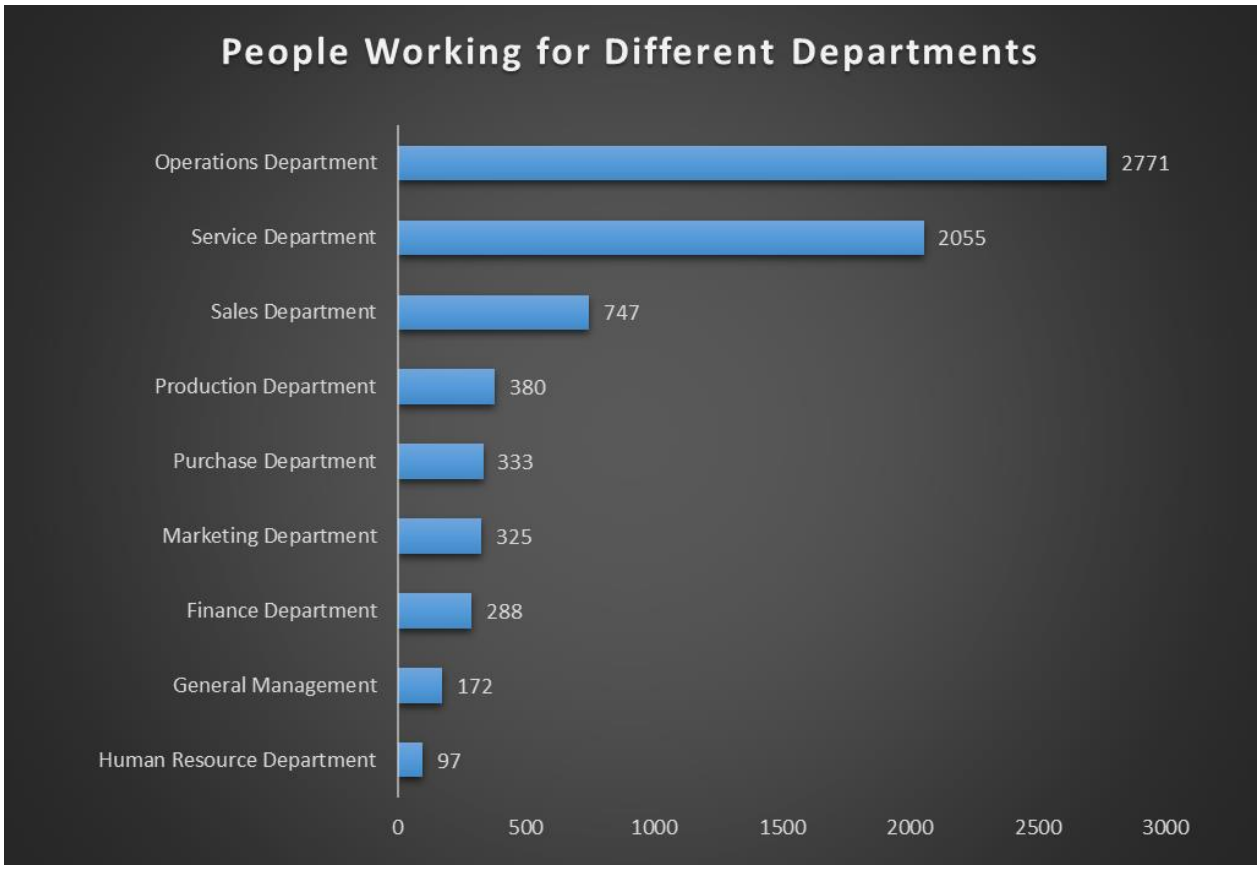
C. **Class Intervals:** The class interval is the difference between the upper class limit and the lower class limit.
Task 3: Draw the class intervals for salary in the company?
- I used the pivot table to calculate the class intervals.
- I took the class width of 10000.
- There are two columns class intervals and number of applicant id.
- I used a bar chart to represent it visually.

Salary Offered	Count of Offered Salary
(blank)	
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

D. **Charts and Plots:** This is one of the most important part of analysis to visualize the data. \
Task 4: Draw Pie Chart / Bar Graph (or any other graph) to show proportion of people working in different department?
- I used pivot table and pivot chart to visualize the proportion of working in different department.
- I also used slicer panel for status.
- Pie chart is used as a graph here.

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

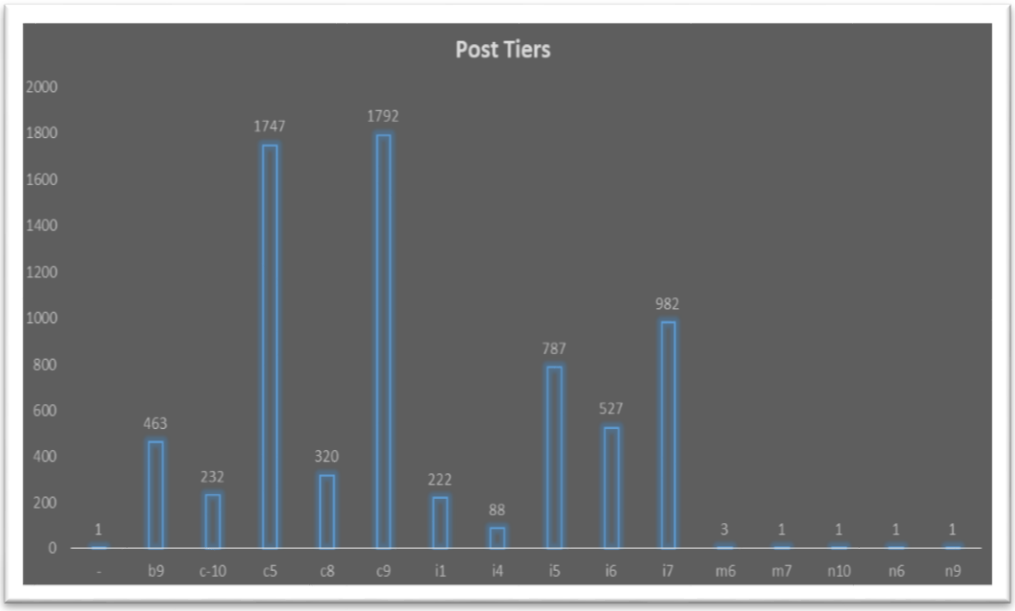

People Working for Different Departments
1%
2%
4%
5%
5%
5%
10%
29%
39%
Department
Human Resource Department
General Management
Finance Department
Marketing Department
Purchase Department
Production Department
Sales Department
Service Department
Operations Department


People Working for Different Departments
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
0
500
1000
1500
2000
2500
3000

E. **Charts:** Use different charts and graphs to perform the task representing the data.
Task 5: Represent different post tiers using chart/graph?

- Representing number of people hired against each post.
- First, I cleaned the data which has missing values under the Post name.
- Second, I selected only the hired people in the Status column.
- Formula Used to calculate the
  Number of people hired=COUNTIFS (B:B,"b9",A:A,"Hired")
- And then I drag it down for others post by changing the Post Name.
- In the last column, I measured the Grand Total by using the sum formula.
- Column is used here to represent the chart.

Post Name	People Hired
-	1
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
Grand Total	**7168**



Tech-Stack Used:

- **Microsoft Excel 365:** It enables users to format, organize and calculate data in a spreadsheet. It organize data in an easy-to-navigate way. We need not to perform any complex mathematical functions. And it turn piles of data into helpful graphics and charts.
- **Microsoft Word 2021:** It is used to make a report (PDF) to be presented to the leadership team.

Insights:

- The rejection rate of male applicant is 6% higher than the female applicant.
- The average salary paid in this company is 50K.
- Most of the employers are in the Operation Department and then in the Human Resource Department.
- The applicant is most likely to get hired if he/she is applying for the HR Department as the rejection rate here is the least.
- There are only 3 candidates in the company who are paid more than 100K.

Results:

In this project, I applied the basic and advance Excel concepts. The concepts related to statistics and EDA have been implemented here by using MS Excel. This project helps me in how to summarize the data and generate valuable insights with the help of the simple tool. I understood how a data analyst can help in hiring process of the company. I learned to implement the learning of Excel in the real-time project. I used different formulas, functions, pivots, slicer, etc. to achieve my target. It helped me in learning how the correlation is used between pivot table and slicer. Overall, it was a great learning experience while doing this project.

Excel Sheet link:

- Please do open in MS Excel.
  https://github.com/SrinivasKamath77/Hiring_Process_Analytics/blob/main/Statistics.xlsx