HIRING PROCESS ANALYTICS

Trainity Project 4 – Statistics Basics

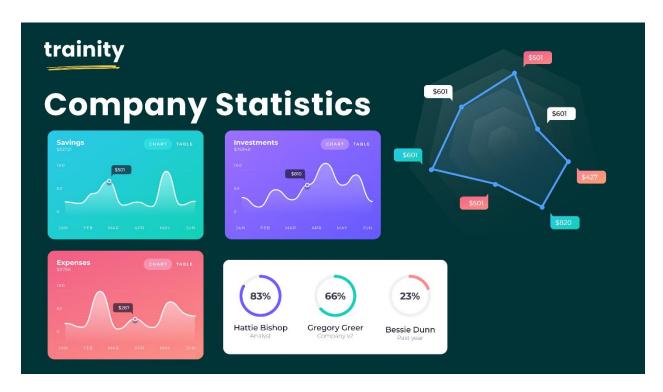


Figure 1 - https://trainity.link/data/project04

Introduction

Imagine you're a data analyst at a multinational company like Google. Your task is to analyze the company's hiring process data and draw meaningful insights from it. The hiring process is a crucial function of any company, and understanding trends such as the number of rejections, interviews, job types, and vacancies can provide valuable insights for the hiring department.

Description

Imagine you're a data analyst at a multinational company like Google. Your task is to analyze the company's hiring process data and draw meaningful insights from it. The hiring process is a crucial function of any company, and understanding trends such as the number of rejections, interviews, job types, and vacancies can provide valuable insights for the hiring department.

As a data analyst, you'll be given a dataset containing records of previous hires. Your job is to analyze this data and answer certain questions that can help the company improve its hiring process.

Process: Here's what you'll be doing:

- **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. Handling Missing Data:** Check if there are any missing values in the dataset. If there are, decide on the best strategy to handle them.
- **3. Clubbing Columns:** If there are columns with multiple categories that can be combined, do so to simplify your analysis.
- **4. Outlier Detection:** Check for outliers in the dataset that may skew your analysis.
- **5. 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.
- 6. 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. Remember, the goal of this project is to use your knowledge of statistics and Excel to draw meaningful conclusions about the company's hiring process. Your insights could potentially help the company improve its hiring process and make better hiring decisions in the future.

Requirements -

1) Project Description:

The aim of the project is to find the use the knowledge of statistics to find out necessary insights from an excel sheet to grab the details and trends of the hiring process of a company. The data subset helps us to experience the power of formulas, charts, pivot tables to get the details of various aspects of data hidden in the data/sheets.

After looking at the data we plan a format to operate on the data, tools needed and charts that can be useful for trends etc while keeping in the questions in mind.

2) Approach:

I first analyzed the data and looked for null values, blanks, duplicates and treated them using basic functions like mean values, find & replace. For certain cell values I changed them to suit better with other values like – etc. After confirming that the data has little to less outliers (salary can not be dropped so kept the values) and saved the raw data to work on with the operations.

The analysis based on excel functions, pivot tables has insights at the bottom of the screengrabs to let the others understand the aim of each analysis.

3) Tech-Stack Used:

Excel – The basic data manipulation, handling and overall pivot charts and the statistics has been handled using MS Excel.

Google Sheets – Used to do the basic data manipulation and to get column stats (gif added)

Word – The report is written in word/docx format using MS Word and then exported to pdf.

Drive – To upload all the essential files attached in the report for reference & pdf upload.

4) Insights:

The summary for each query is given with the screenshot but to summarize the overall thing I came to the conclusion that among the total data set we have **7168 data rows**, **7 columns & a total of 50183** cells in the given dataset. No duplicates were present in the sheet while only 1 blank salary column was present and was treated using the mean of salary while in few column few data were inconsistent which we treated to match the other values like – replaced with prefer not say in gender column and such clubbing.

For more data insight on the questions look at the respective questions for screenshot and pivot charts.

5) Result:

The Project has given me a good idea about the importance and vast variety of excel usage which helps us to look deep into plain numbers and generate a visually insightful data which can help business to gain knowledge and prepare for future as well as give out trends to focus on from the numerical data. The statistics section has helped me learn about the various concept which are useful for majority of the operation for handling and displaying basic charts and generate a meaningful dashboard.

Data Cleaning Task:

Will not explain much just have added the links of gif/process.(These were the basic steps to clean and adjust the data)

Data Count

Data Cleaning

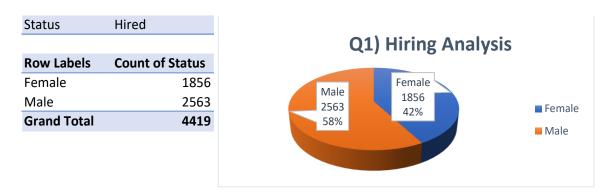
Data Stats

Data Blank Treatment (Salary mean)

Main Task -

A. Hiring Analysis: The hiring process involves bringing new individuals into the organization for various roles.

Your Task: Determine the gender distribution of hires. How many males and females have been hired by the company?



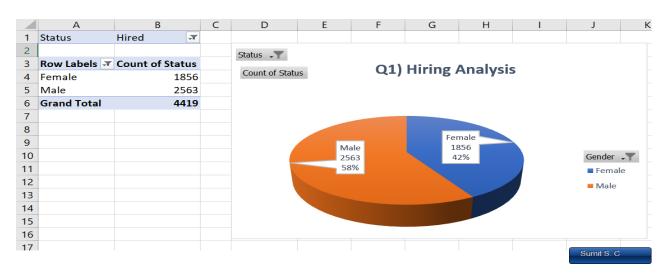
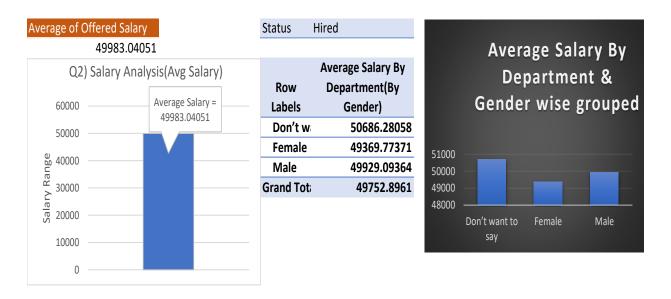


Figure 1) Q1 – <u>Hiring Analytics Link</u>

Insights: From The above data we can get a gist of the hiring data filtered by Hired Employee (so that only we get the Hired employees). We can see that around 58% male & 42% females have been hired in the company.

B. Salary Analysis: The average salary is calculated by adding up the salaries of a group of employees and then dividing the total by the number of employees..

Your Task: What is the average salary offered by this company? Use Excel functions to calculate this.



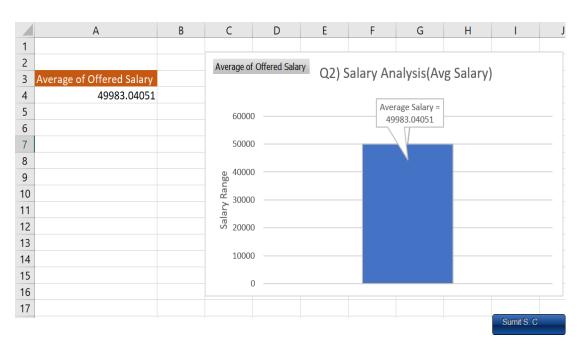


Figure 2) Q2 - Salary Analysis

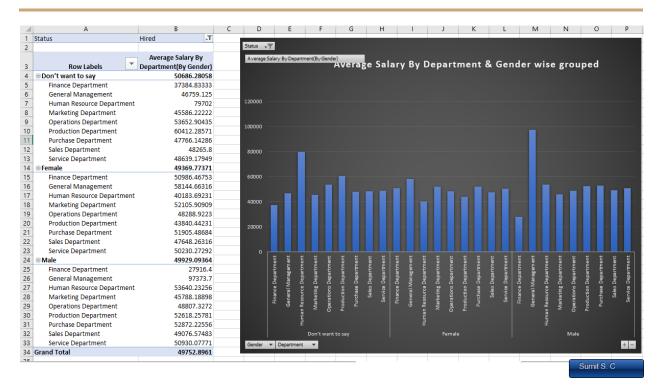


Figure 3) Q2 - Salary Analysis (Genderwise & By Department))

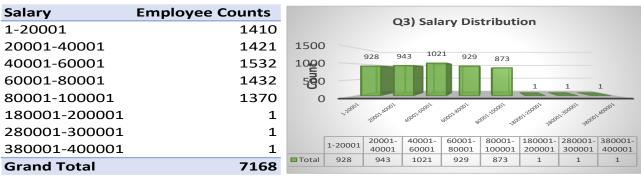
Insights:

From the above two pivot tables and bar chart we can see the average salary of the organization

- 1. Considering the overall average salary of the organisation of all the hired personal which comes around **49983.**
- 2. In 2nd observation I made slight change and calculated the average by genderwise and sorted them by department so we get the deep insights about the
 - a. Overall average by genderwise (when we zoom out the pivot)
 - b. The distribution of salary by gender in various department and get the average salary of the same.

C. Salary Distribution : 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..

Your Task: Create class intervals for the salaries in the company. This will help you understand the salary distribution.



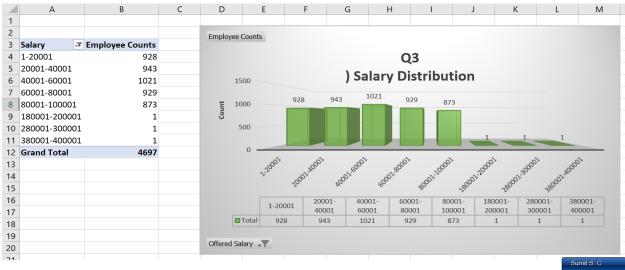
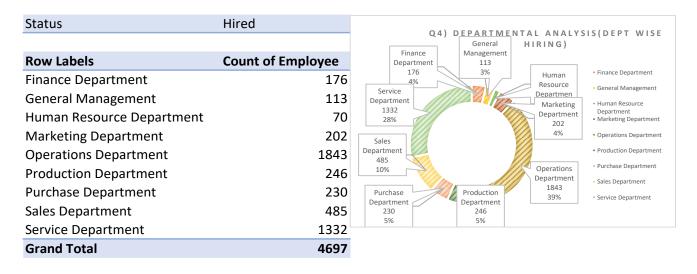


Figure 4) Q3 - <u>Salary Distribution</u>

Insights: From the above insight we can have made few class interval on the salary data by the range of 20000 and then summarized the value of counts and got a pivot chart which shows the number of salary in that range. The rough idea shows that there is a data outlier in the salary range above 1.8L,3L & 4L only single individual have the high salary while the graph indicates that majority of the salary lies between 40k-60k and same with other trend which are visible.

D. Departmental Analysis : Visualizing data through charts and plots is a crucial part of data analysis..

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



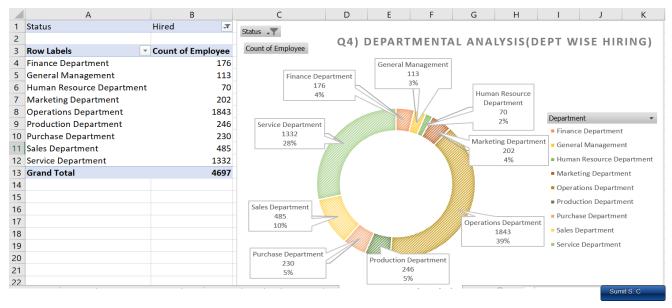


Figure 5) Q4 - Departmental Analysis

Insights:

From the above pie chart we can get the insights of the hired employees working in various departments of the organization.

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

Your Task: 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.

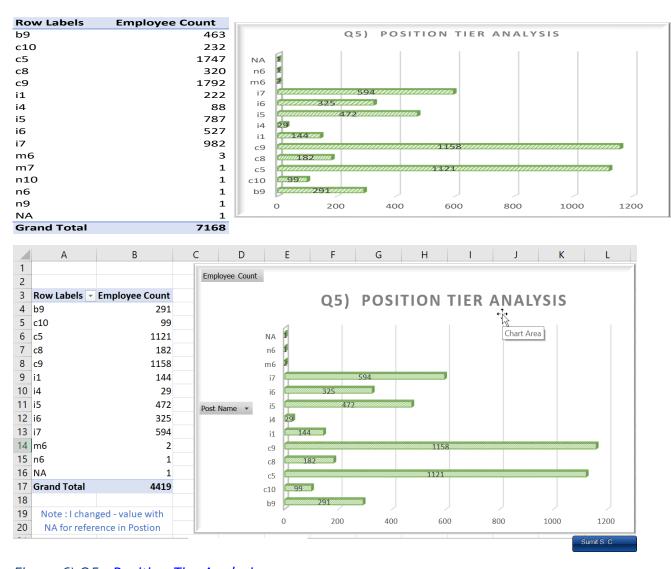


Figure 6) Q5 - Position Tier Analysis

Insights:

From the above observation we get to see the distribution of position at the organization. The roles of **c9,c5,i7** are among the top in the organization.

Important Links:

Drive Folder Link

<u>Individual Excel Sheets</u> (Also linked below the screenshots)

Final Excel sheet (cleaned data & with Dashboard to look into the deep insights)

Word File Link

Pdf File (Will Be in the drive folder – cant add before I upload the file)

Thank You