HIRING PROCESS ANALYTICS

-STATISTICS

Agenda

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PROJECT DESCRIPTION

- The project is all about analyzing the company’s hiring process data and drawing meaningful insights from it. The Hiring process is a crucial function for a company, and understanding trends such as some rejections, job types, and offered salaries can provide valuable insights for the hiring department.

  - The project data is given in an Excel sheet, it should be cleaned and made ready to analyze the data.

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TECH STACK USED

- **Software: Microsoft Excel**

A spreadsheet application by Microsoft used for data analysis, visualization, and automation with formulas, charts, and VBA.

- **Operating System: Windows**

A widely used OS by Microsoft, known for its user-friendly interface, multitasking, and software compatibility.

APPROACH

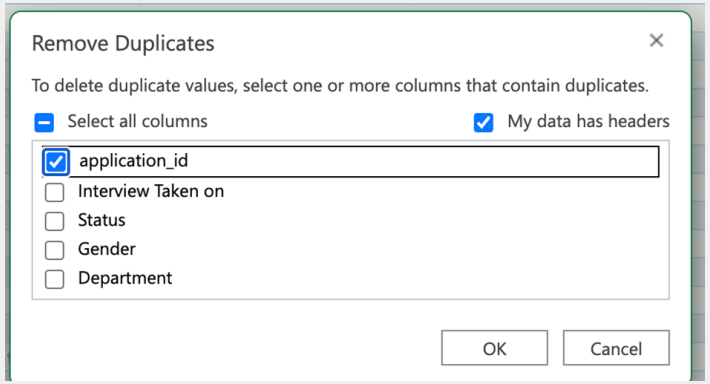
- To analyze any data, we should first clean the data like empty blanks, duplicates , null values ,design ,Outlier Detection etc.
- So I started cleaning the given data
- I followed the below steps for cleaning the data

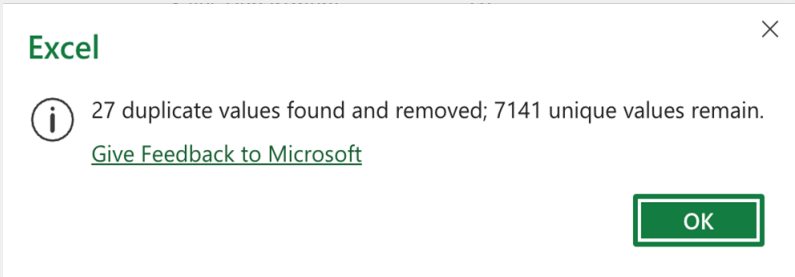
1)Firstly I have converted the raw data into table format.

2)I analysed the given columns , I have changed one column name event_name to Gender.

Application ID	Interview Date	Status	Gender	Department	Post Name	Offered Salary

3)I checked for duplicates





4)And then I have found the Outliers

Q1: =quartile(range,1)

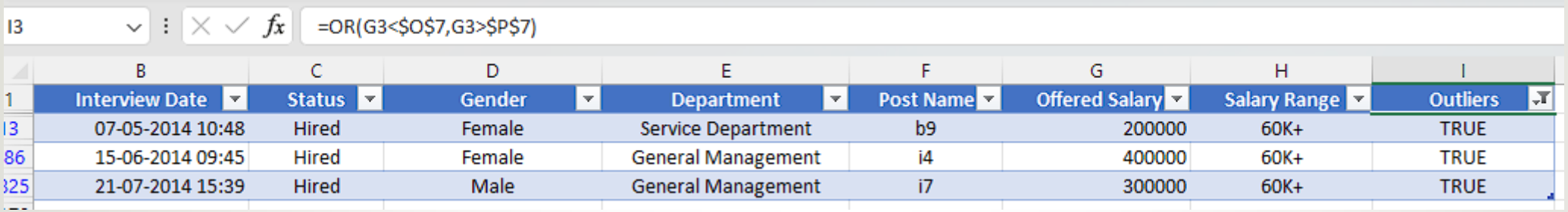
Q3: =quartile(range,3)

IQR: =Q3-Q1

Lower bound: Q1-(1.5*IQR)

Upper bound: Q3+(1.5*IQR)

Outlier Detection	
Q1	25582.25
Q3	74418.5
IQR	48836.25
LowerBound	-47672.125
UpperBound	147672.875
No.Of.Outliers	0
No.Of.Normals	7138



	B	C	D	E	F	G	H	I
1	Interview Date	Status	Gender	Department	Post Name	Offered Salary	Salary Range	Outliers
13	07-05-2014 10:48	Hired	Female	Service Department	b9	200000	60K+	TRUE
86	15-06-2014 09:45	Hired	Female	General Management	i4	400000	60K+	TRUE
325	21-07-2014 15:39	Hired	Male	General Management	i7	300000	60K+	TRUE

I have created new columns to find the outliers and then I filtered only TRUE outliers, I found 3 outliers and deleted them.

5) Also I have searched if there are any empty blank in the entire dataset by Shortcut CTRL+G

select table - select special – select blanks – ok

You can see the highlighted empty blanks I found a single empty blank in salary column G80 rather than deleting the entire column I found average of the entire salary using the formula =ROUND(AVERAGE(H1:H7139),0) and I have pasted the value in the blank.

6) And also there are some cells in the Gender like (-) without any gender there I have filtered it and filled with “Don’t want to say” and single cell in the Post_name with the value (-) I replaced with c9 bcz it is most recurring.

DATA ANALYTIC TASKS:

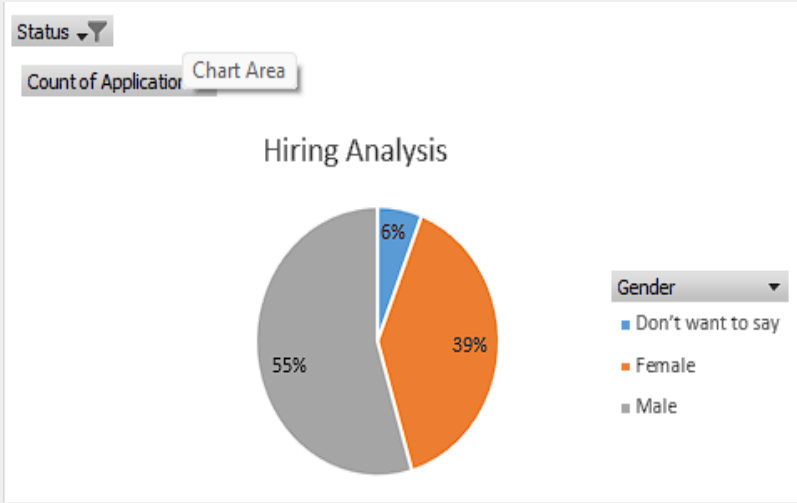
A. Hiring Analysis: The hiring process involves bringing new individuals into the organization for various roles.
Your Task: Determine the gender distribution of hires. How many males and females have been hired by the company?

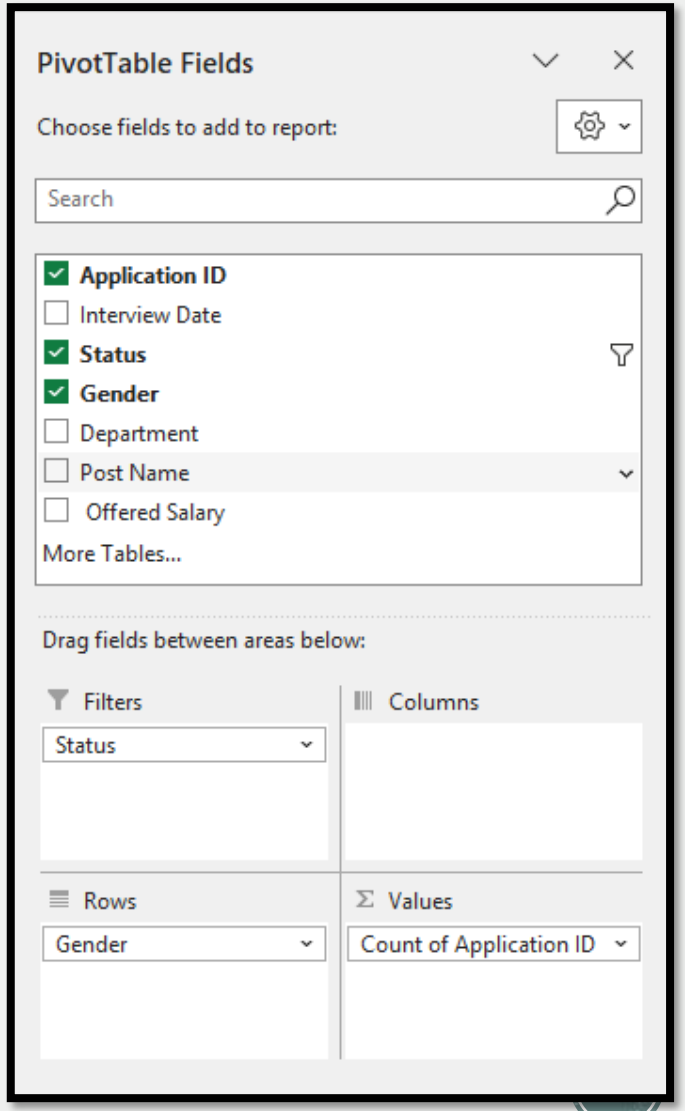
ANS:

To do this Question I have used Pivot Table
for gender Distribution of Hired

select table - insert - Pivot table

	A	B
1	Status	Hired
2		
3	**Row Labels**	**Count of Application ID**
4	Don't want to say	277
5	Female	1848
6	Male	2551
7	**Grand Total**	**4676**





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.

ANS:

To do this Question I have used

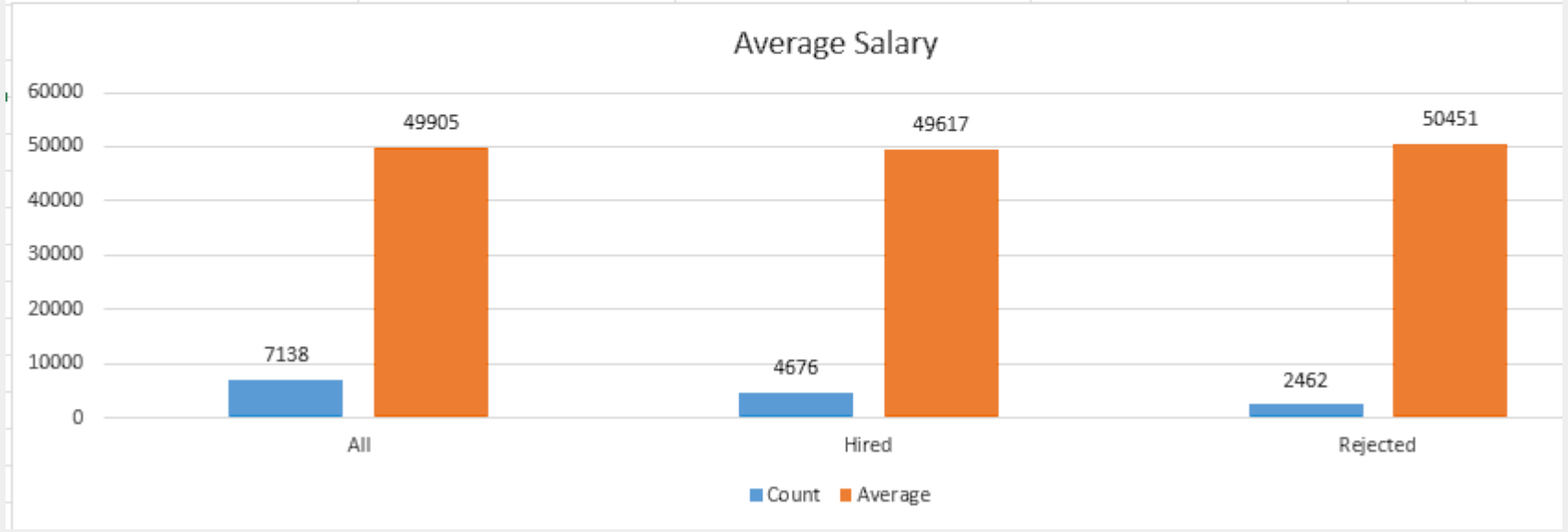
=COUNT(DATASET!B:B) for All Count

=ROUND(AVERAGE(Dataset!H:H),0) for All Average

=COUNTIF(Dataset!D:D, "Hired") for hired Count

=ROUND(AVERAGEIF(Dataset!D:D,"Hired",Dataset!H:H),0) for hired average

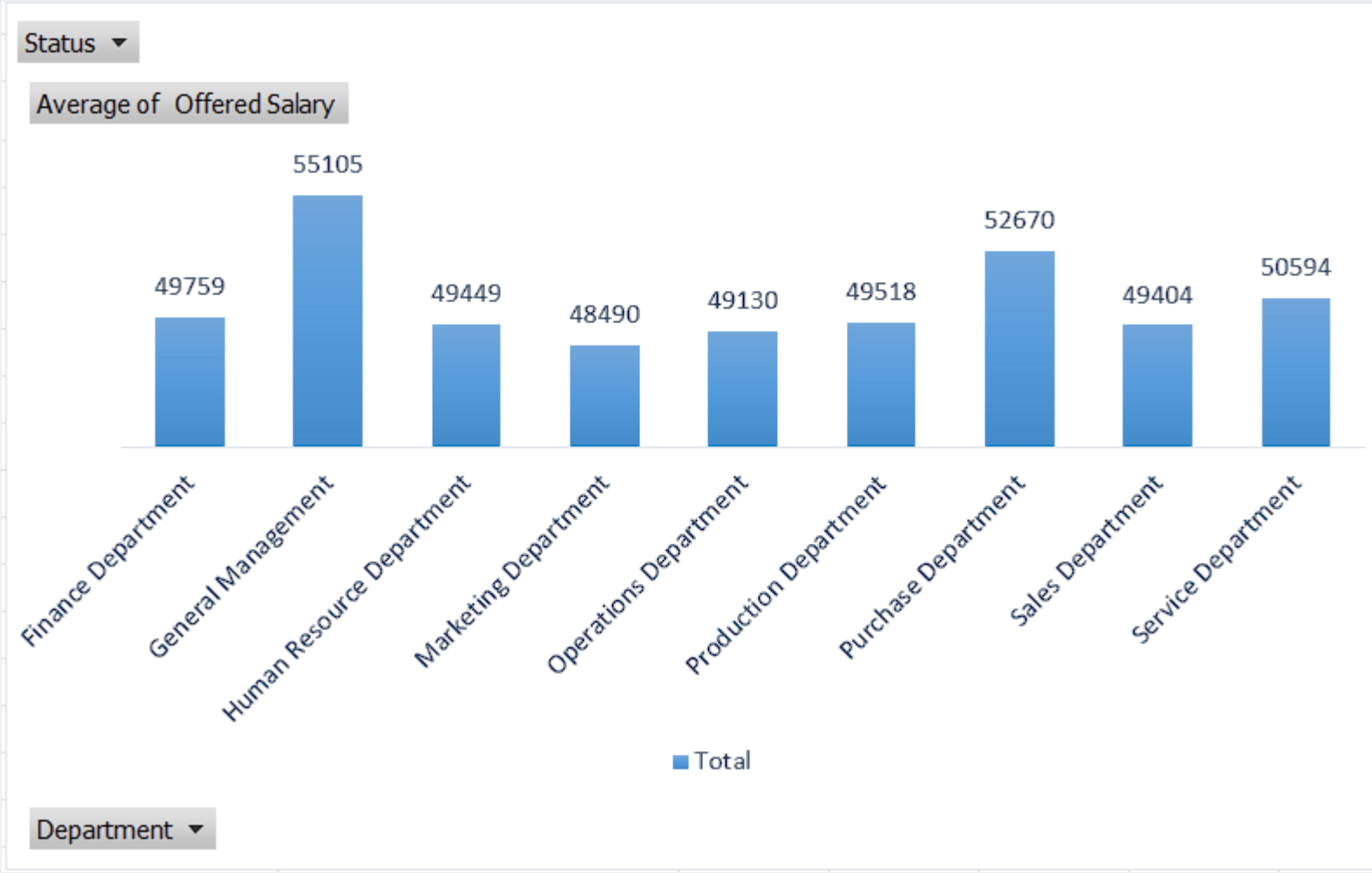
	Count	Average
All	7138	49905
Hired	4676	49617
Rejected	2462	50451



- Department wise salary averages

Status	(All)

Row Labels	Average of Offered Salary
Finance Department	49759
General Management	55105
Human Resource Department	49449
Marketing Department	48490
Operations Department	49130
Production Department	49518
Purchase Department	52670
Sales Department	49404
Service Department	50594
Grand Total	**49905**



3. 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.

ANS:

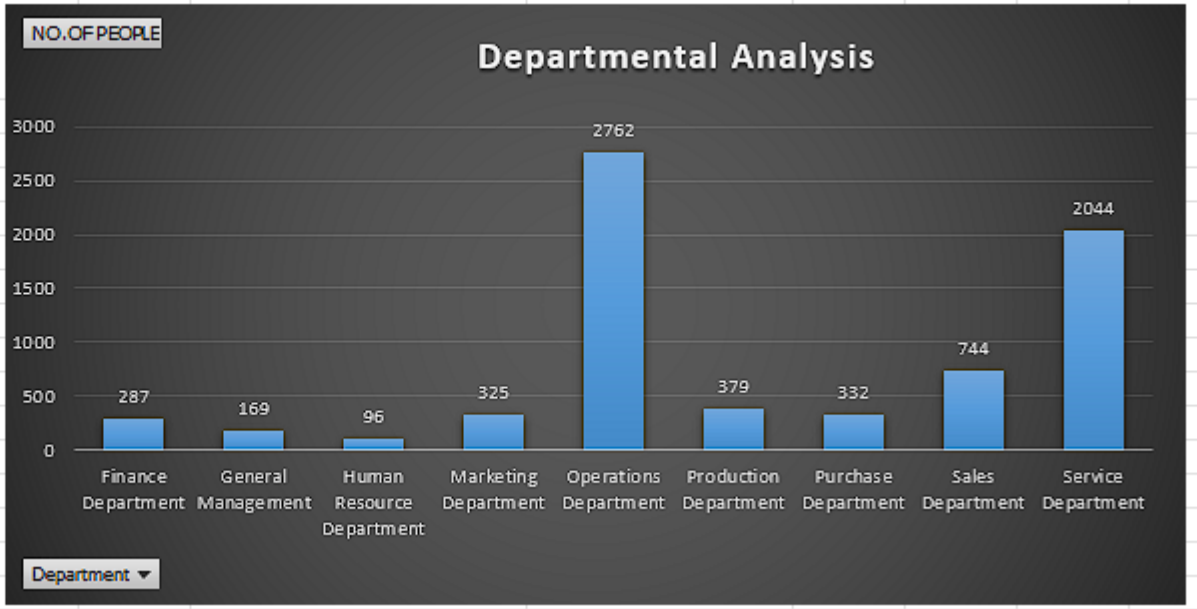
MAXIMUM SALARY	99967
MINIMUM SALARY	100
MAXIMUM SALARY FOR HIRED	99967
MINIMUM SALARY FOR HIRED	800
LIMITS	
lower limit	0
upper limit	200000

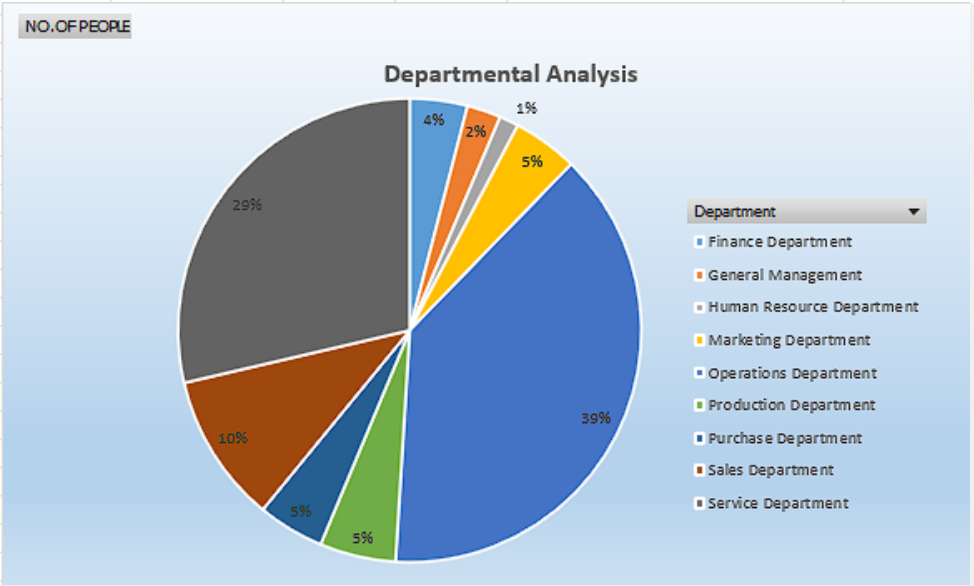
		count	
S.NO	CLASS INTERVAL	salary offer for all	salary offer for HIRED
1	0-20000	1400	922
2	20000-40000	1415	938
3	40000-60000	1531	1020
4	60000-80000	1424	924
5	80000-100000	1368	872

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

ANS:

Row Labels	NO.OF PEOPLE
Finance Department	287
General Management	169
Human Resource Department	96
Marketing Department	325
Operations Department	2762
Production Department	379
Purchase Department	332
Sales Department	744
Service Department	2044
Grand Total	**7138**

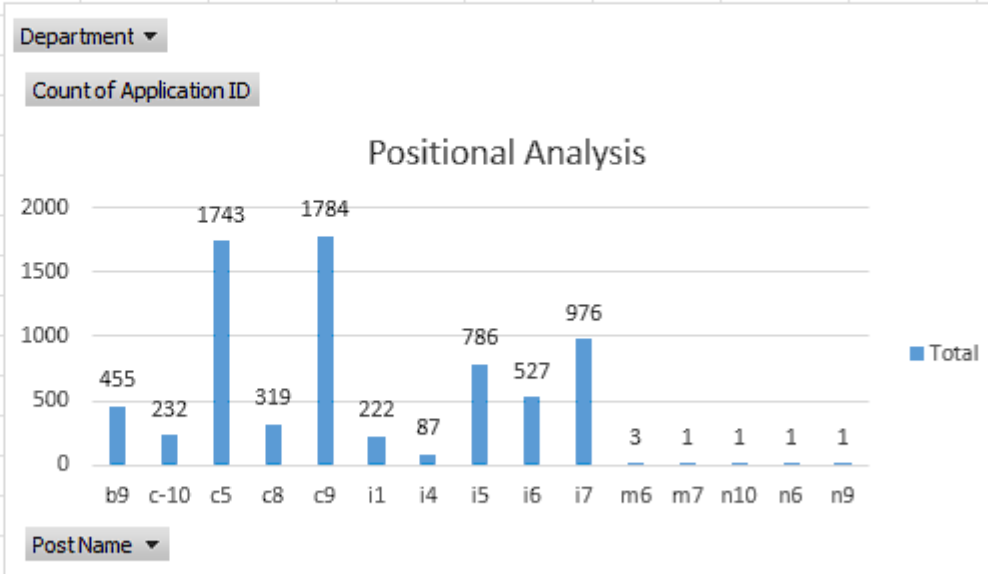


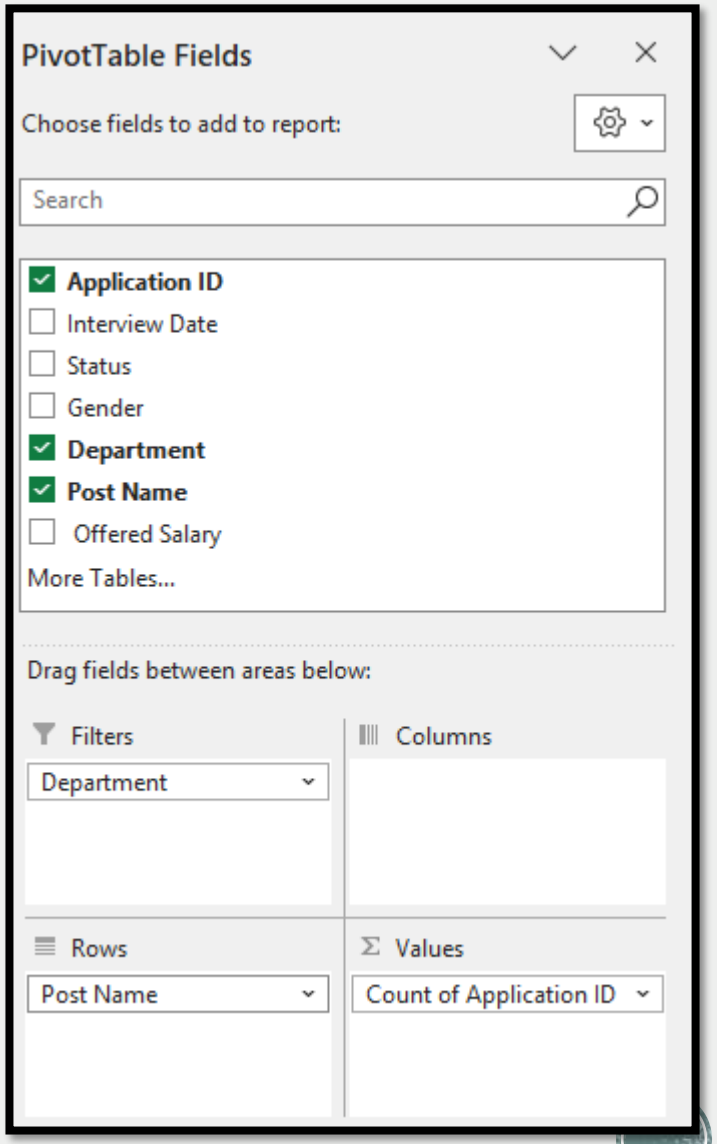


5) Position Tier Analysis:

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.

Department	(All)
Row Labels	Count of Application ID
b9	455
c-10	232
c5	1743
c8	319
c9	1784
i1	222
i4	87
i5	786
i6	527
i7	976
m6	3
m7	1
n10	1
n6	1
n9	1
Grand Total	7138





REFERENCE LINK:

The link for excel sheet file:

HiringProcessAnalytics.xlsx

INSIGHTS

A. Hiring Analysis: Identified gender distribution among hires to evaluate diversity in recruitment.

B. Salary Analysis: Calculated the average salary offered across different roles and levels to assess pay trends.

C. Salary Distribution: Created salary class intervals to understand income segmentation and salary structure.

D. Departmental Analysis: Examined hiring proportions across various departments to identify workforce allocation trends.

E. Position Tier Analysis: Analyzed the distribution of hires across entry, mid, and senior levels to assess career growth patterns.

RESULT

In this project, I analyzed the hiring data of a company, focusing on data cleaning, preprocessing, and in-depth analysis of the dataset.

I utilized various charts and graphs to visualize the data, providing meaningful insights that aid in decision-making for hiring strategies, salary structuring, and workforce planning. This analysis helped in optimizing HR policies and improving recruitment efficiency.


thank
you!