

A PROJECT ON HIRING PROCESS ANALYTICS



By – Vansh

Mail ID – aroravansh11@gmail.com

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?

Solution:

Excel Table:

[..\Task excel Files\StatisticsA.xlsx](#)

	A	B	C	D	E	F	G	H
1	application_id	Interview Taken on	Status	event_checklist	event_name	Department	Post Name	Offered Salary
2	383422	5/1/2014 11:40	Hired	available	Male	Service Department	c8	56553
3	907518	5/6/2014 8:08	Hired	available	Female	Service Department	c5	22075
4	176719	5/6/2014 8:08	Rejected	available	Male	Service Department	c5	70069
5	429799	5/2/2014 16:28	Rejected	available	Female	Operations Department	i4	3207
6	253651	5/2/2014 16:32	Hired	available	Male	Operations Department	i4	29668
7	289907	5/1/2014 7:44	Hired	available	Male	Sales Department	-	85914
8	959124	5/6/2014 16:27	Rejected	available	Male	Sales Department	i7	69904
9	86642	5/9/2014 13:17	Rejected	available	Male	Sales Department	i7	11758
10	751029	5/2/2014 13:09	Hired	available	Female	Service Department	i4	15156
11	434547	5/2/2014 13:11	Rejected	available	Female	Service Department	i4	49515
12	518854	5/1/2014 9:00	Rejected	available	Male	Service Department	n10	26990
13	649039	5/7/2014 10:48	Hired	available	Female	Service Department	b9	200000
14	199526	5/7/2014 10:50	Hired	available	Male	Service Department	b9	86787
15	539803	5/15/2014 9:31	Hired	available	Male	Finance Department	b9	2308
16	191009	5/9/2014 12:48	Hired	available	Female	Service Department	i7	56688
17	195323	5/9/2014 12:48	Hired	missing	-	Service Department	i7	81757
18	51318	5/2/2014 8:07	Hired	available	Male	Service Department	i5	15134
19	742283	5/2/2014 8:11	Rejected	missing	-	Service Department	i5	100
20	513166	5/1/2014 22:53	Hired	available	Female	Operations Department	i1	73579
21	791372	5/1/2014 22:54	Rejected	available	Male	Operations Department	i1	50351
22	47857	5/1/2014 22:55	Rejected	available	Female	Operations Department	i1	38462
23	834101	5/1/2014 22:53	Rejected	available	Don't want to say	Operations Department	i1	82510
24	985008	5/1/2014 9:41	Rejected	available	Male	Service Department	i6	52554
25	891568	5/1/2014 16:28	Hired	available	Female	Operations Department	i7	3423
26	935899	5/10/2014 14:17	Rejected	available	Male	Service Department	i1	88744
27	780839	5/10/2014 14:18	Hired	available	Female	Service Department	i1	70979
28	851764	5/1/2014 16:01	Rejected	available	Male	Operations Department	i6	99574
29	202821	5/1/2014 16:01	Hired	available	Male	Operations Department	i6	52176
30	969924	5/1/2014 11:47	Rejected	available	Male	Finance Department	i1	61432
31	765579	5/1/2014 9:26	Rejected	available	Male	Sales Department	i4	87884
32	924976	5/1/2014 9:26	Rejected	available	Male	Sales Department	i4	56229
33	896164	5/1/2014 17:21	Hired	available	Don't want to say	Production Department	i7	37947

Explanation:

This table contains dataset which is used for analysis—

- In this First I added a column “event_checklist” for checking/finding if there is any missing data in “event_name” column, done this using **IF** function.

- Then after finding the missing values, I colored those cells for highlighting the missing values
- After that I converted the table into pivot table for filtering records and finding the count of males, females, etc.
hiring

Result Tables:

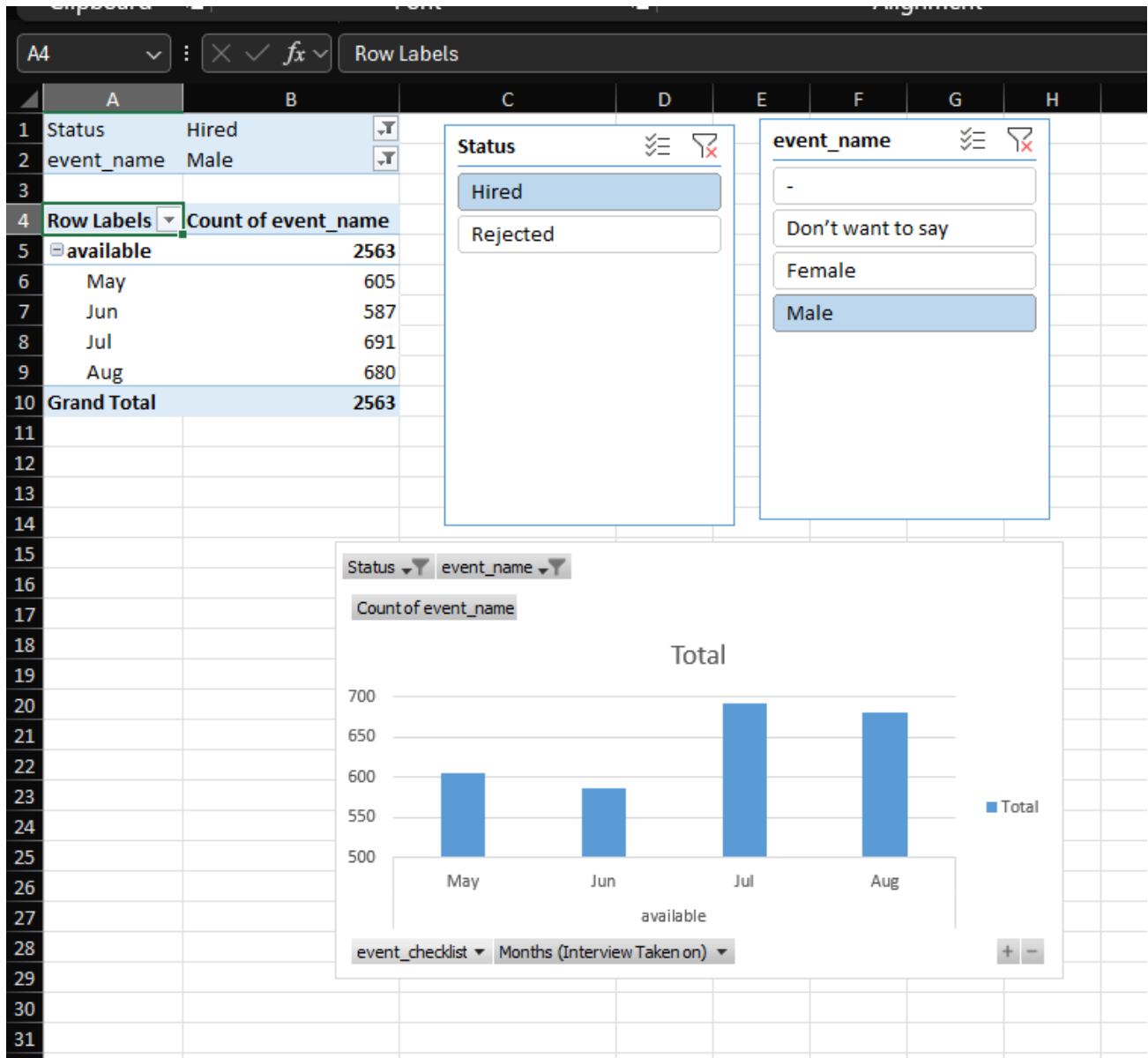


Table 1 – Male Hired Count

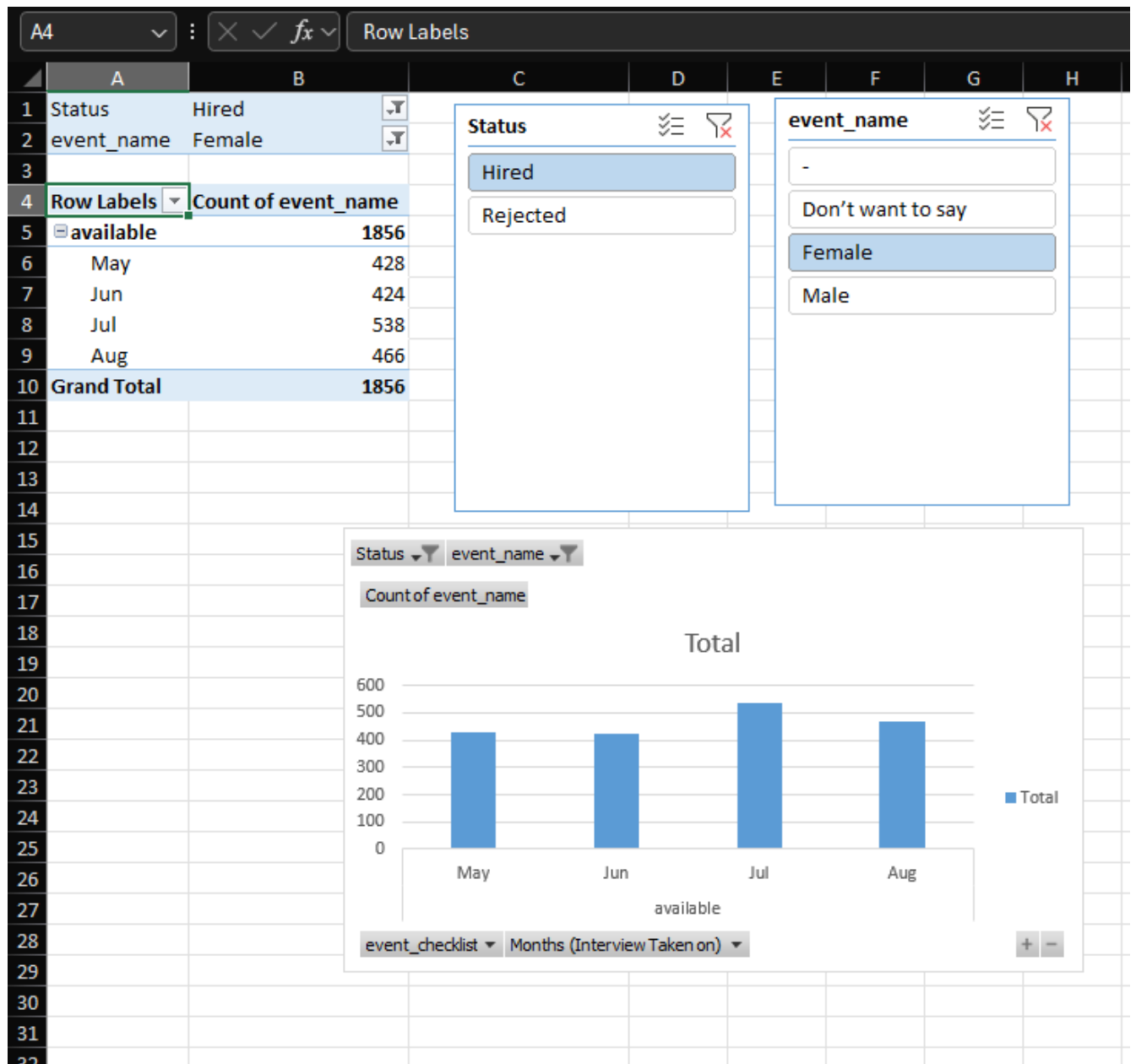


Table 2 – Female Hired Count

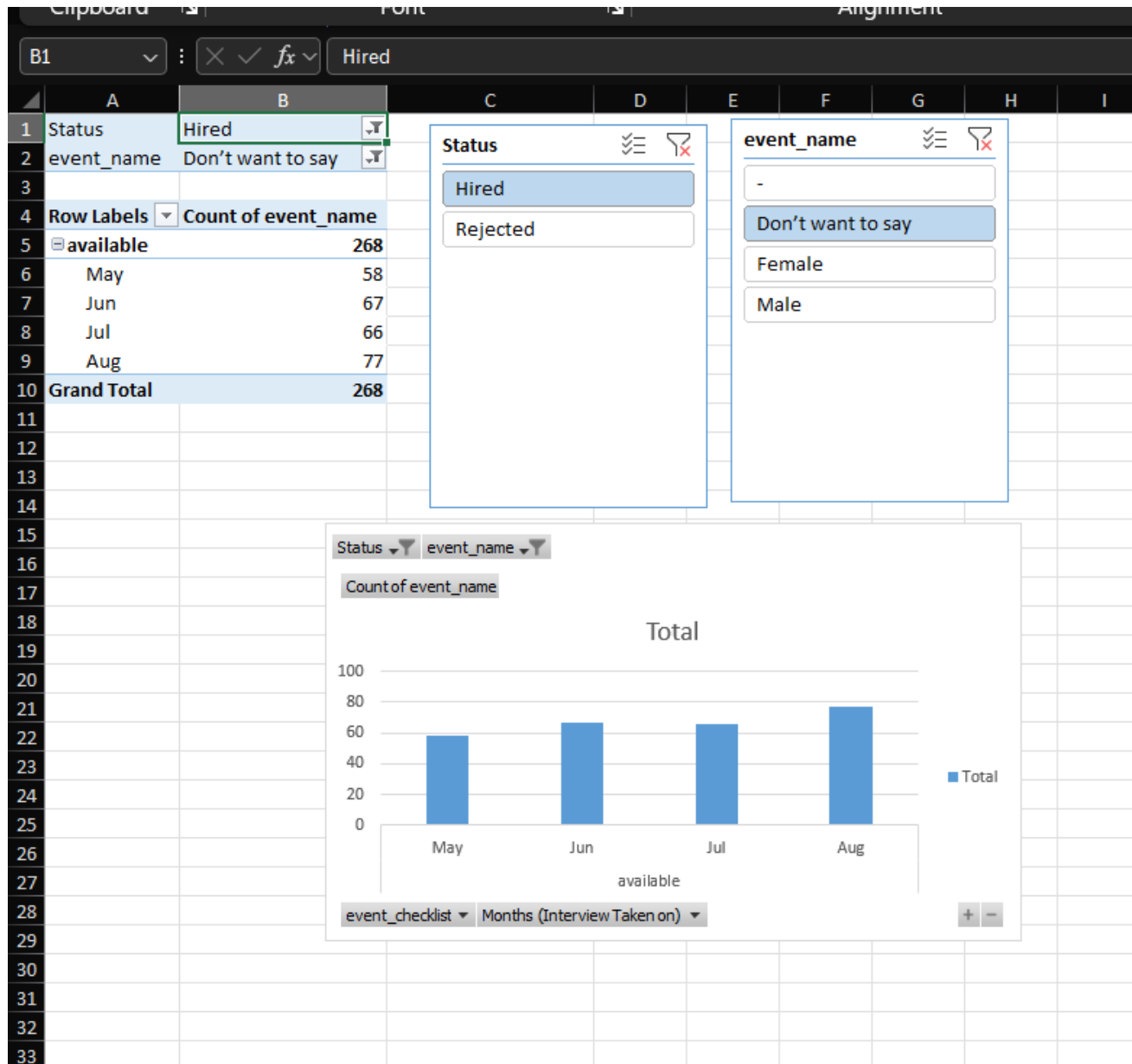


Table 3 – Don't want to say Category Hired Count

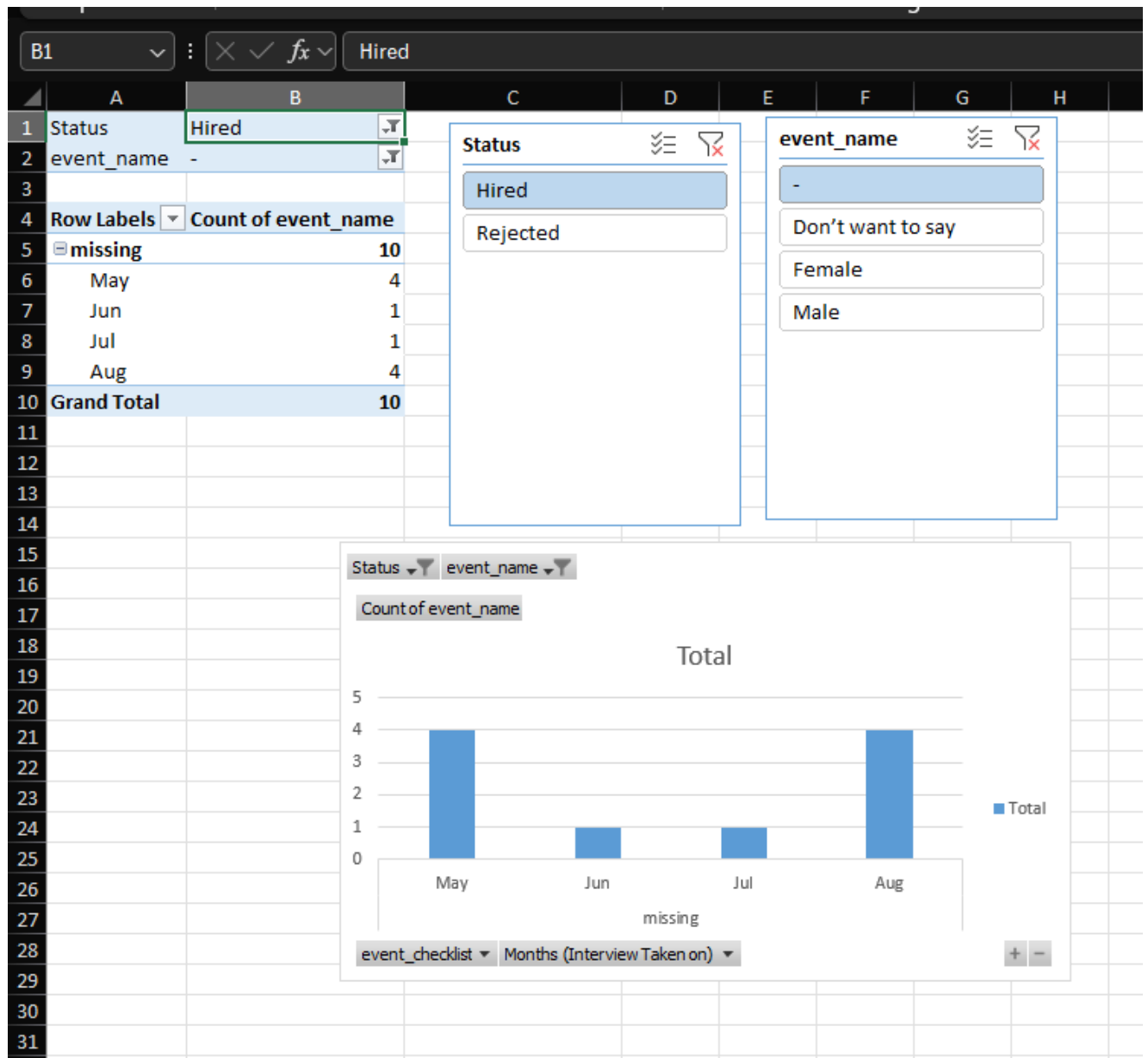


Table 4 – Missing Category Hired Count

(P.T.O)

- In the above shown result tables I have used **slicer** for better understanding and filtering of data.
- Also, for representing data according to months I have used **pivot charts** for better **visualization**

Here above table clearly shows the results as

- Table 1 shows the “**Male Hired Count**”
- Table 2 shows the “**Female Hired Count**”
- Table 3 shows the “**Don’t want to say Category Hired Count**”
- Table 4 shows the “**Missing Category Hired Count**”.

(P.T.O)

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.

Solution:

Excel Table:

[..\Task excel Files\StatisticsB.xlsx](#)

=AVERAGE (G2:G7169)							
	application_id	Interview Taken on	Status	event_name	Department	Post Name	Offered Salary
7147	449644	8/29/2014 14:40	Hired	Female	Human Resource Department	i5	76971
7148	887973	8/22/2014 0:56	Hired	Female	Service Department	b9	38985
7149	518834	8/12/2014 7:35	Rejected	Male	Production Department	c9	68938
7150	497131	8/15/2014 12:22	Hired	Male	Production Department	c9	89428
7151	320464	8/14/2014 18:45	Hired	Female	Operations Department	c5	1611
7152	641060	8/20/2014 17:49	Rejected	Male	Operations Department	i6	67779
7153	786222	8/20/2014 17:51	Hired	Male	Operations Department	i6	47286
7154	964206	8/25/2014 9:23	Hired	Male	Service Department	i5	7849
7155	586934	8/29/2014 19:00	Hired	Don't want to say	Service Department	c9	63159
7156	321440	8/17/2014 12:17	Hired	Female	Production Department	c9	89565
7157	975415	8/17/2014 7:48	Hired	Male	Service Department	c5	86162
7158	683982	8/17/2014 7:49	Hired	Don't want to say	Service Department	c5	58900
7159	665614	8/21/2014 7:30	Rejected	Male	Sales Department	c5	71449
7160	935497	8/27/2014 17:36	Rejected	Male	Service Department	c5	67196
7161	106032	8/22/2014 15:50	Hired	Male	Service Department	i7	16756
7162	166185	8/27/2014 5:01	Hired	Female	Service Department	i7	30952
7163	736189	8/28/2014 17:29	Hired	Male	Service Department	c9	64150
7164	614594	8/28/2014 17:30	Hired	Male	Service Department	c9	40152
7165	493131	8/28/2014 17:32	Hired	Male	Service Department	c9	49282
7166	214261	8/31/2014 1:36	Hired	Female	Service Department	c5	57742
7167	932441	8/31/2014 1:37	Hired	Male	Service Department	c5	69932
7168	39010	8/31/2014 1:38	Rejected	Male	Service Department	c5	14489
7169	686055	8/26/2014 12:14	Hired	Male	Operations Department	c5	54201
7170	Total						49983.02902

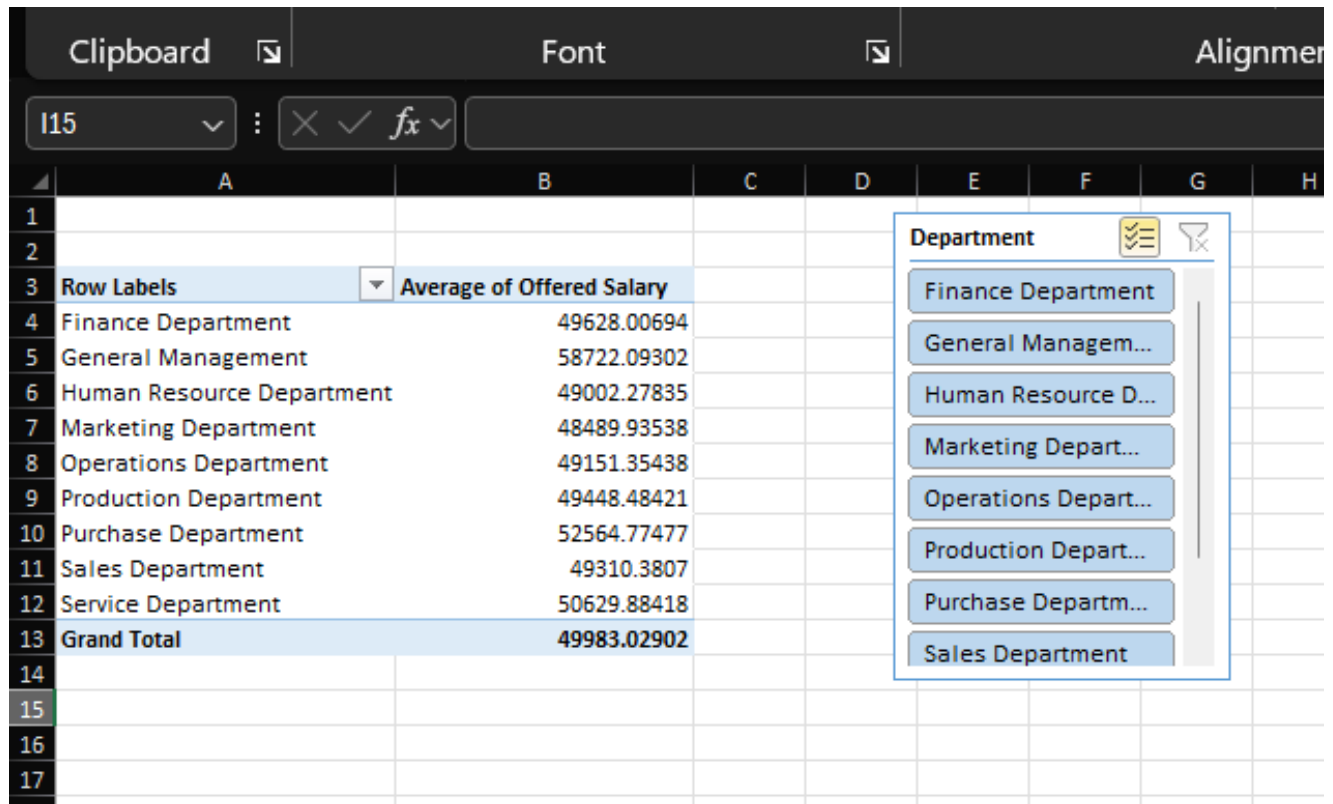
Explanation:

Here For Finding the average of all the employees from all the departments I used **average** function

“average(G2:G7169)”

So, Average Salary of this Company is 49983.02902

Department wise average salary is presented below:



Row Labels	Average of Offered Salary
Finance Department	49628.00694
General Management	58722.09302
Human Resource Department	49002.27835
Marketing Department	48489.93538
Operations Department	49151.35438
Production Department	49448.48421
Purchase Department	52564.77477
Sales Department	49310.3807
Service Department	50629.88418
Grand Total	49983.02902

Explanation:

- For Finding average salaries according to departments I used pivot table.
- In this firstly I converted **normal table** into **pivot table**
- Then I used **pivot table fields**
- First I selected **department column** in pivot fields and then selected **average offered salary** from value field settings after that automatically the records got filtered and I got the average salaries according to various departments present in the company.

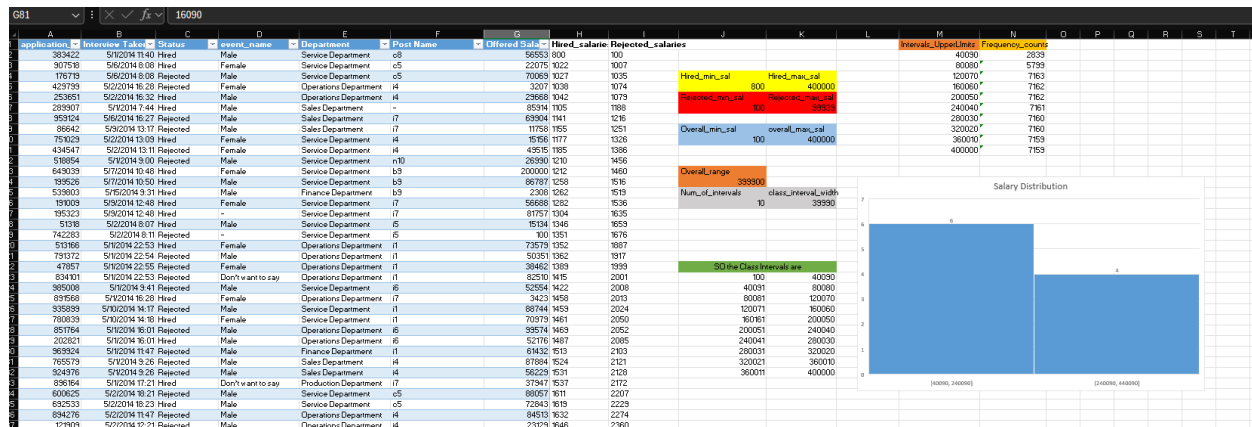
- And at last for Good understanding of data and for filtering on the basis of single and multiple selections, I used **slicer**.

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.

Solution:

[..\Task excel Files\StatisticsC.xlsx](#)



Explanation:

- In this task first I analyzed hired salaries and rejected salaries of the company with finding the minimum and maximum salaries of both hired as well as rejected salaries.

- Then i found the overall minimum and maximum salaries and assumed some number of intervals for making different class intervals as it is used for the calculations
 - After this I seperately shown the upper limits of class intervals and calculated the frequency counts for describing the persons with various types of salaries which comes under different classes as mentioned in the excel table.
 - After finding all the necessary details I added a Histogram for presenting the salary distribution of the company.
- So finally I have completed my task and obtained my goal of showing salary distribution of the company.

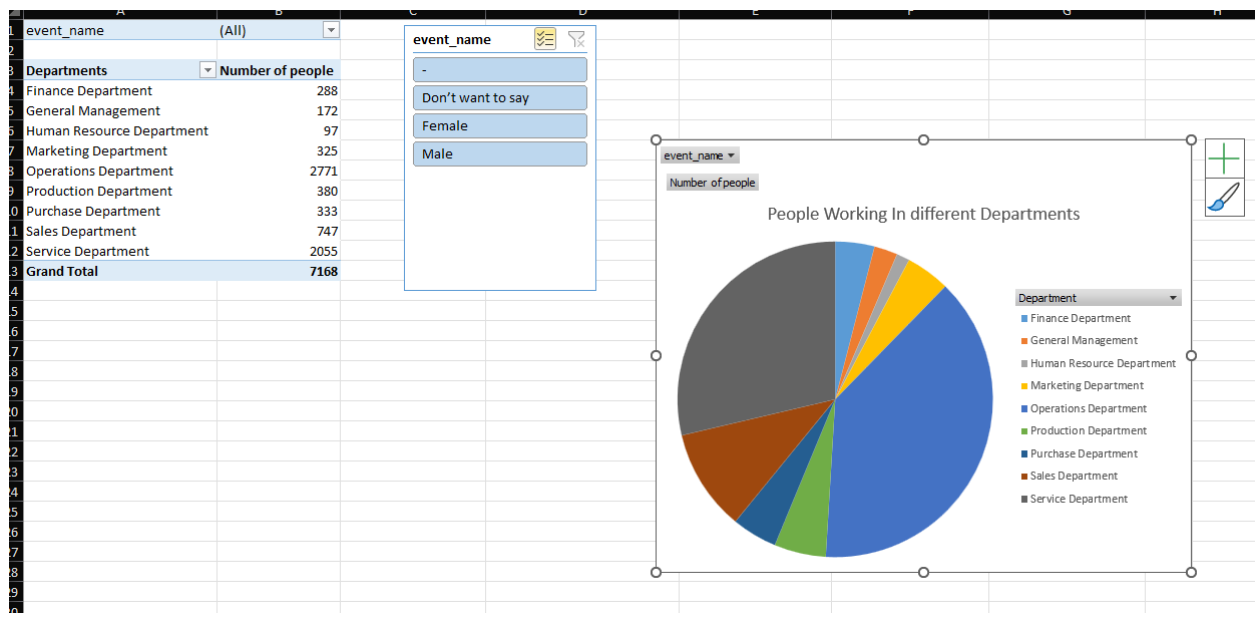
D) Departmental Analysis: Visualizing data through charts and plots is a crucial part of data analysis.

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

Solution:

Result set:

[..\Task excel Files\StatisticsD.xlsx](#)



Explanation:

- Here Firstly for finding department wise distribution for number of people working in each department
- I converted **normal table** to **pivot table**
- Then Using **pivottable fields** I entered all the fields according to my use like I entered “**event_name**” in the

filters section, **“Department”** in the rows section,
“Number of people” in the values section

- I used **slicer** for filtering the data and for better understanding of data
- Then I used pie chart For good visualization.

→So at last I have achieved my goal of showing the people working in different departments.

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.

Solution:

	A	B	C	D	E	F	G	H	I	J	K	L
1	application_id	Interview Taken on	Status	event_name	Department	Post Name	Offered Salary		Hired_positions	Rejected_positions	Total_positions	
2	383422	5/1/2014 11:40	Hired	Male	Service Department	c8	56553		1		1	
3	907518	5/6/2014 8:08	Hired	Female	Service Department	c5	22075		308	155	463	
4	176719	5/6/2014 8:08	Rejected	Male	Service Department	c5	70069		105	127	232	
5	429799	5/2/2014 16:28	Rejected	Female	Operations Department	i4	3207		1182	565	1747	
6	253651	5/2/2014 16:32	Hired	Male	Operations Department	i4	29668		193	127	320	
7	289907	5/1/2014 7:44	Hired	Male	Sales Department	-	85914		1239	553	1792	
8	959124	5/6/2014 16:27	Rejected	Male	Sales Department	i7	69904		151	71	222	
9	86642	5/9/2014 13:17	Rejected	Male	Sales Department	i7	11758		32	56	88	
10	751029	5/2/2014 13:09	Hired	Female	Service Department	i4	15156		511	276	787	
11	434547	5/2/2014 13:11	Rejected	Female	Service Department	i4	49515		337	190	527	
12	518854	5/1/2014 9:00	Rejected	Male	Service Department	n10	26990		635	347	982	
13	649039	5/7/2014 10:48	Hired	Female	Service Department	b9	200000		2	1	3	
14	199526	5/7/2014 10:50	Hired	Male	Service Department	b9	86787			1	1	
15	539803	5/15/2014 9:31	Hired	Male	Finance Department	b9	2308			1	1	
16	191009	5/9/2014 12:48	Hired	Female	Service Department	i7	56688		1		1	
17	195323	5/9/2014 12:48	Hired	-	Service Department	i7	81757			1	1	
18	51318	5/2/2014 8:07	Hired	Male	Service Department	i5	15134	Grand Total	4697	2471	7168	
19	742283	5/2/2014 8:11	Rejected	-	Service Department	i5	100					
20	513166	5/1/2014 22:53	Hired	Female	Operations Department	i1	73579					
21	791372	5/1/2014 22:54	Rejected	Male	Operations Department	i1	50351					
22	47857	5/1/2014 22:55	Rejected	Female	Operations Department	i1	38462					
23	834101	5/1/2014 22:53	Rejected	Don't want to say	Operations Department	i1	82510					
24	985008	5/1/2014 9:41	Rejected	Male	Service Department	i6	52554					
25	891568	5/1/2014 16:28	Hired	Female	Operations Department	i7	3423					
26	935899	5/10/2014 14:17	Rejected	Male	Service Department	i1	88744					
27	780839	5/10/2014 14:18	Hired	Female	Service Department	i1	70979					
28	851764	5/1/2014 16:01	Rejected	Male	Operations Department	i6	99574					
29	202821	5/1/2014 16:01	Hired	Male	Operations Department	i6	52176					
30	969924	5/1/2014 11:47	Rejected	Male	Finance Department	i1	61432					
31	765579	5/1/2014 9:26	Rejected	Male	Sales Department	i4	87884					

Table 1 – Total Positions in Company

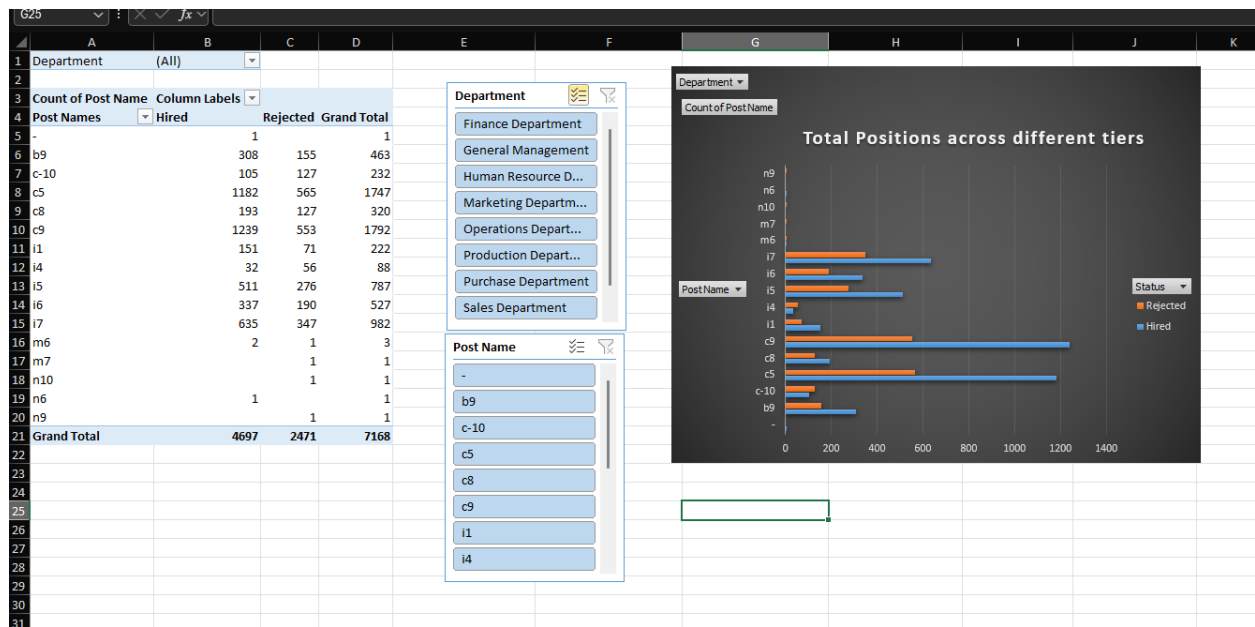


Table 2 - Total Positions across different tiers

Explanation:

- In this task first I managed to analyze the total positions in the company with completely describing the hired and rejected positions using **pivot table**.
- Then I used various **pivottable fields** for filtering the data according to departments, post names and status.
- After finding all the necessary details I added a bar chart for presenting the total positions across different tiers.

→ So finally I have completed my task and obtained my goal of showing total positions across different tiers in the company.

Project Description

In this project I assumed me as a data analyst at google, I have to analyze the necessary hiring process data to derive actionable insights.

This analysis helped me to understand patterns of hiring, such as the number of rejections, job types and total vacancies etc,.

Approach

In this I followed a simple approach firstly I understood the task then I analyzed the data and according to need I cleaned the data and then finally with the cleaned data I used my excel skills to produce the results of the task and achieved my goal.

Tech – Stack Used

--- Microsoft 365 (16.0.17...) enterprise addition

Insights

The first main thing is that it's my first excel project so I gained a project work experience which benefited me in terms of knowledge,

And the main things I learnt are –

- Hiring Trends Over Time
- Job types and Vacancies
- Factors influencing Hiring Decisions

Overall the project was great for me as a first project.

Result

So in the result I will say I accomplished some achievements like

- Analyzed large datasets
- Discovered seasonal hiring trends
- Determined the average time to fill positions
- provided data-driven recommendations

Through this project I achieved all of this .