Hiring Process Analytics

Project Description:
This project is all about analyzing a company's data on people who applied for different positions in different departments. We'll be using statistics and Excel formulas to make sense of the information and draw important conclusions about the company.
We'll go through several steps to understand the data, check for missing values, group different categories together, spot any outliers, and summarize the data.

Here are the tasks we'll be working on:
1. Hiring: We'll figure out how many guys and girls got hired by the company.
2. Average Salary: We'll calculate the average salary offered by the company.
3. Class Intervals: We'll create groups based on salary ranges.
4. Charts and Plots: We'll make cool graphs like Pie Charts or Bar Graphs to show the percentage of people in different departments.
5. Charts: We'll use more graphs to show the different levels of job positions.

This project will give us important insights to help the company make decisions and improve their hiring process.

Approach:
In analyzing the dataset of a company's registrations for different posts in various departments, I followed a structured approach using Google Sheets. Here's how I tackled the project:
1. Hiring: I used the COUNTIF function in Google Sheets to determine the number of males and females hired by the company.
2. Average Salary: To calculate the average salary offered by the company, I utilized the AVERAGE function in Google Sheets.
3. Class Intervals: I utilized MIN and MAX function in Google Sheets to draw class intervals and FREQUENCY function to find the distribution.
4. Charts and Plots: Using the Insert Chart feature in Google Sheets, I created Pie Charts to show the proportion of people working in different departments.
5. Post Tiers: I utilized the AVERAGEIF and MAXIF functions in Google Sheets to categorize different job positions into their respective tiers based on specific conditions, which were then used to create charts or graphs.

By leveraging the functions in Google Sheets, as well as utilizing the charting features, I obtained valuable insights to support decision-making and enhance the company's hiring process.

Tech-Stack Used:

For this project, I utilized Google Sheets as the primary software tool. Google Sheets is a spreadsheet application included as part of the free, web-based Google Docs Editors suite offered by Google.

Insights:

1. *Gender Distribution* : It is important to analyze the number of males and females hired to gain insights into the gender diversity of the company. This information helps evaluate the company's efforts in promoting equality and inclusivity in its hiring process.

To find number of male employees and female employees following formulas were used:

```
=COUNTIFS(D2:D,"Male",C2:C,"Hired")
=COUNTIFS(D2:D,"Female",C2:C,"Hired")
=SUM(J7,J9)
```

	I	J
	Males Hired	2563
	Females Hired	1856
	Total Male + Female Hired	4419

2. *Salary Analysis*: Calculating the average salary offered by the company provides valuable information about the overall compensation provided to employees. This insight allows us to assess the company's competitiveness in terms of salary and understand the salary structure within the organization.

To calculate average salary of the employees we can use the following function:

```
=AVERAGE(G2:G)
```

	Average salary	49983.02902

As the G column contains the salary offered by the company, taking its average will give the average salary of the company.

***3. Salary Distribution Visualization*:** Drawing class intervals for salaries helps us group salary data into meaningful ranges. This visualization allows us to observe patterns and identify any concentration or gaps in salary levels across the company, giving us a better understanding of the salary distribution.

To find class intervals we have to find upper and lower limits. We can do that as following:

=MIN(G2:G)

=MAX(G2:G)

Min Salary	100
Max Salary	400000

We can now divide the classes into appropriate limits, and find number of elements in those classes by:

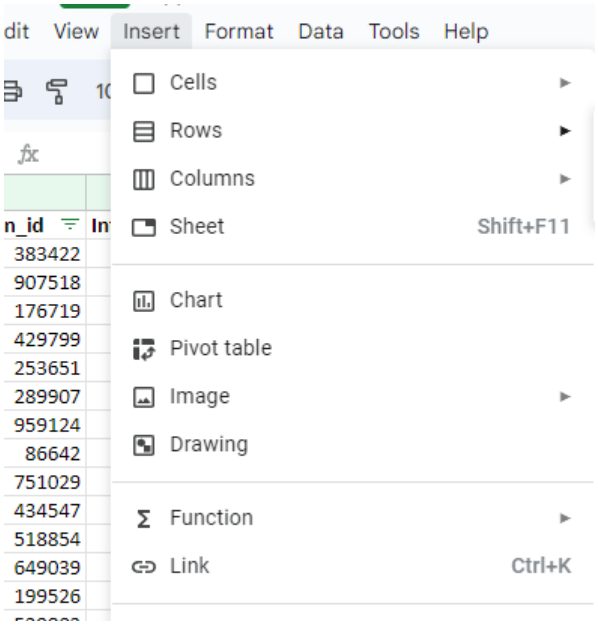
=FREQUENCY(G2:G,L8:L11)

Class Interval	
Min Salary	100
Max Salary	400000

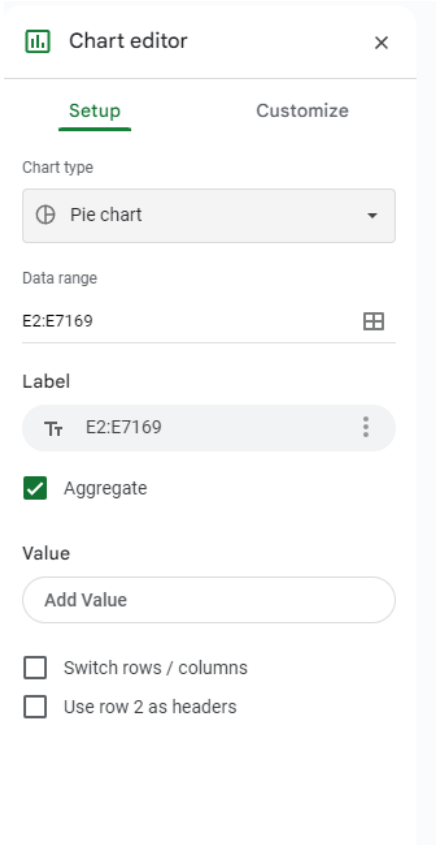
Class Intervals	**Frequency**
0-100000	7164
100000-200000	1
200000-300000	1
300000-400000	1

4. *Charts and Plots*: Creating a Pie Chart, Bar Graph, or other graphical representations helps visualize the proportion of people working in different departments. This visual representation provides a clear overview of the departmental distribution within the company, enabling us to identify the size and composition of each department.

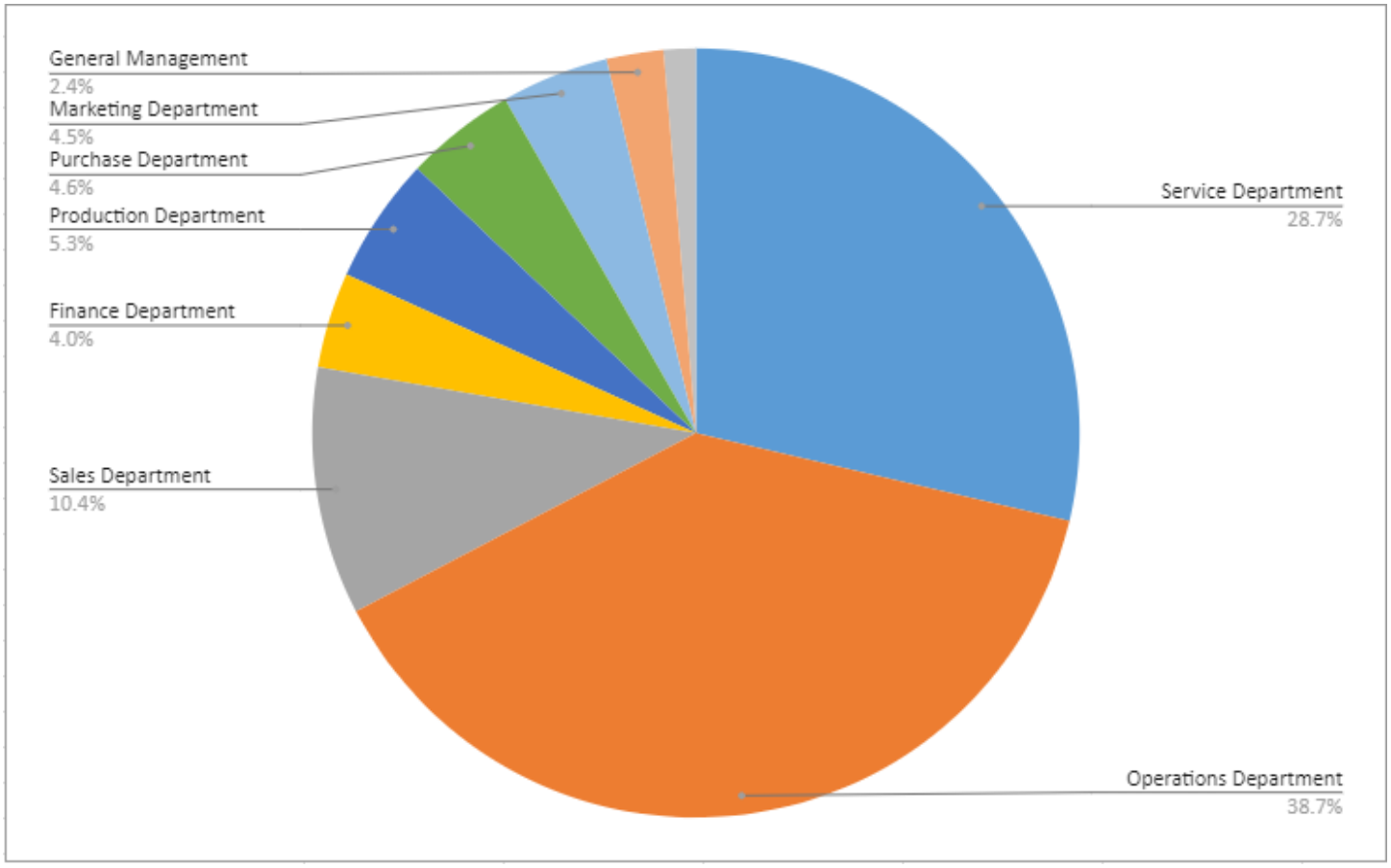
To Create a Pie Chart of different departments we can use the chart in the insert menu.



Then we select Data Range and select chart type:



Department Pie Chart



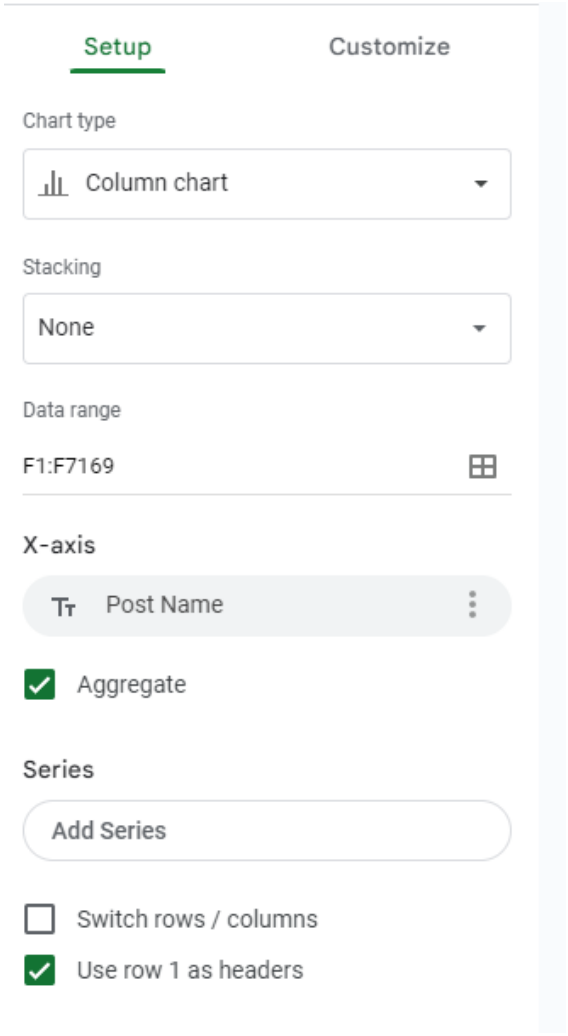
5. *Visual Representation of Post Tiers*: Utilizing various charts and graphs, such as stacked bar graphs or grouped column charts, allows us to visually represent different post tiers within the company. This representation helps us compare job levels and understand the hierarchical structure of positions within the organization.

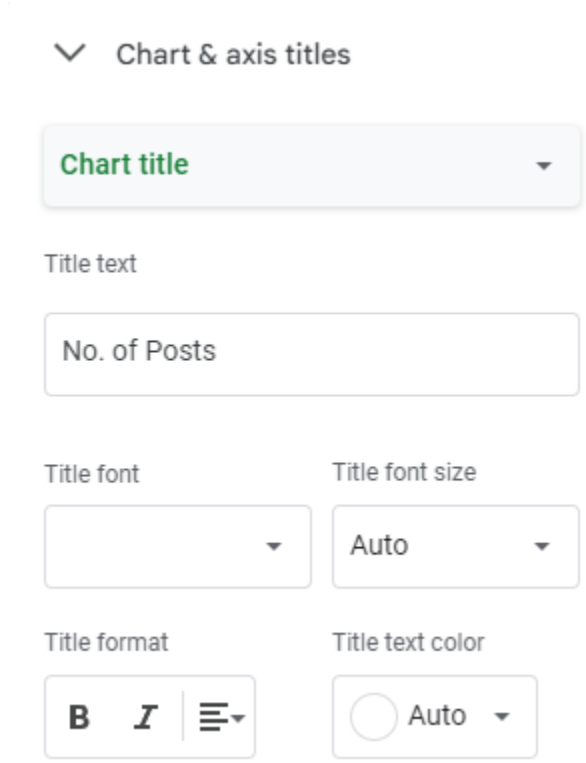
To plot charts and graphs of various post tiers, we have to find parameters for each post, such as average salary and maximum salary.
To find average salary and maximum salary we can use following formulae:

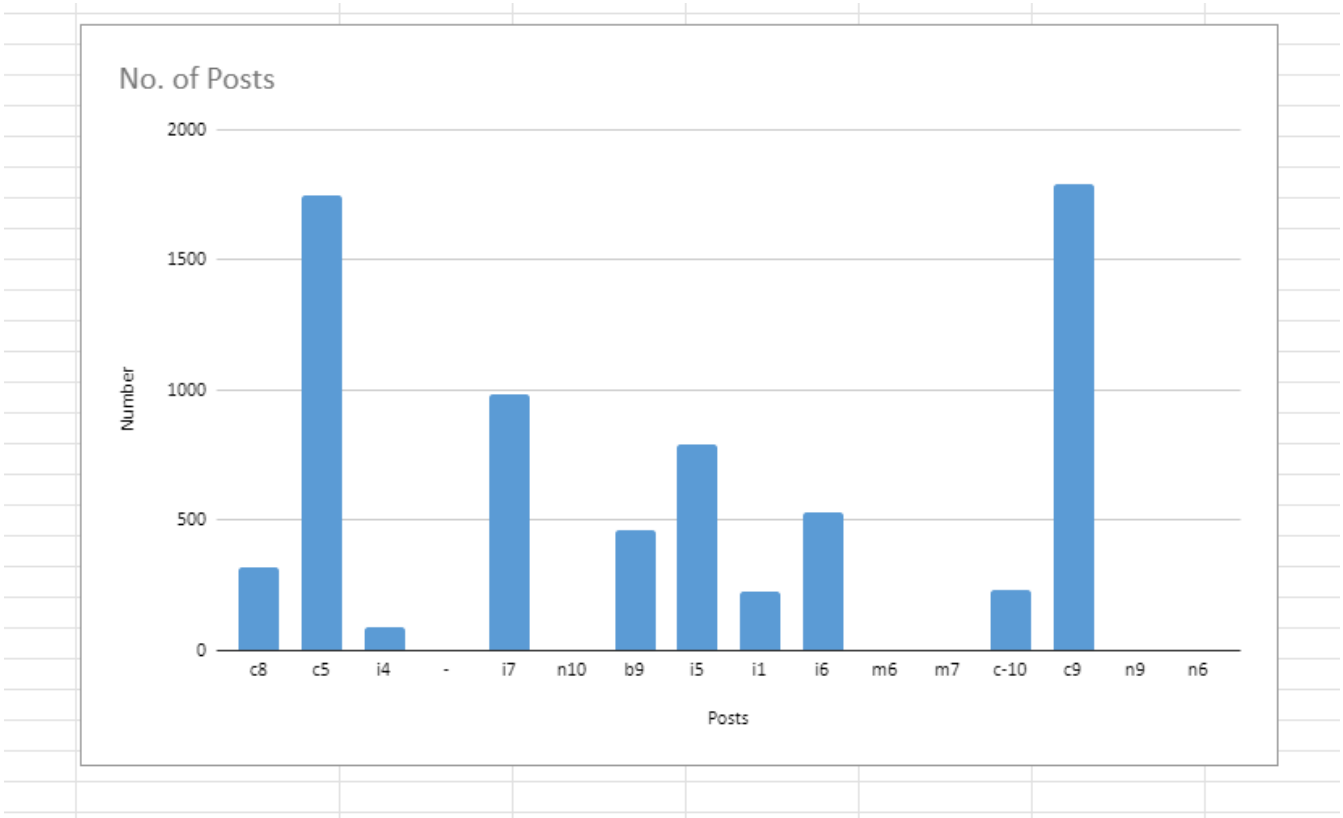
```
=AVERAGEIF(F2:F,I57,G2:G)
=MAXIFS(G2:G,F2:F,I57)
```

	I	J	K
	Unique Posts	Average Salary	Max Salary
	c8	50701.4625	99967
	c5	50213.50372	99948
	i4	48877.84091	400000
	-	85914	85914
	i7	50065.36086	300000
	n10	26990	26990
	b9	49666.76458	200000
	i5	49391.92503	98926
	i1	49943.93694	99939
	i6	48839.24858	99762
	m6	34521.33333	68466
	m7	41402	41402
	c-10	51134.62069	99891
	c9	50201.18583	99953
	n9	46219	46219
	n6	44700	44700

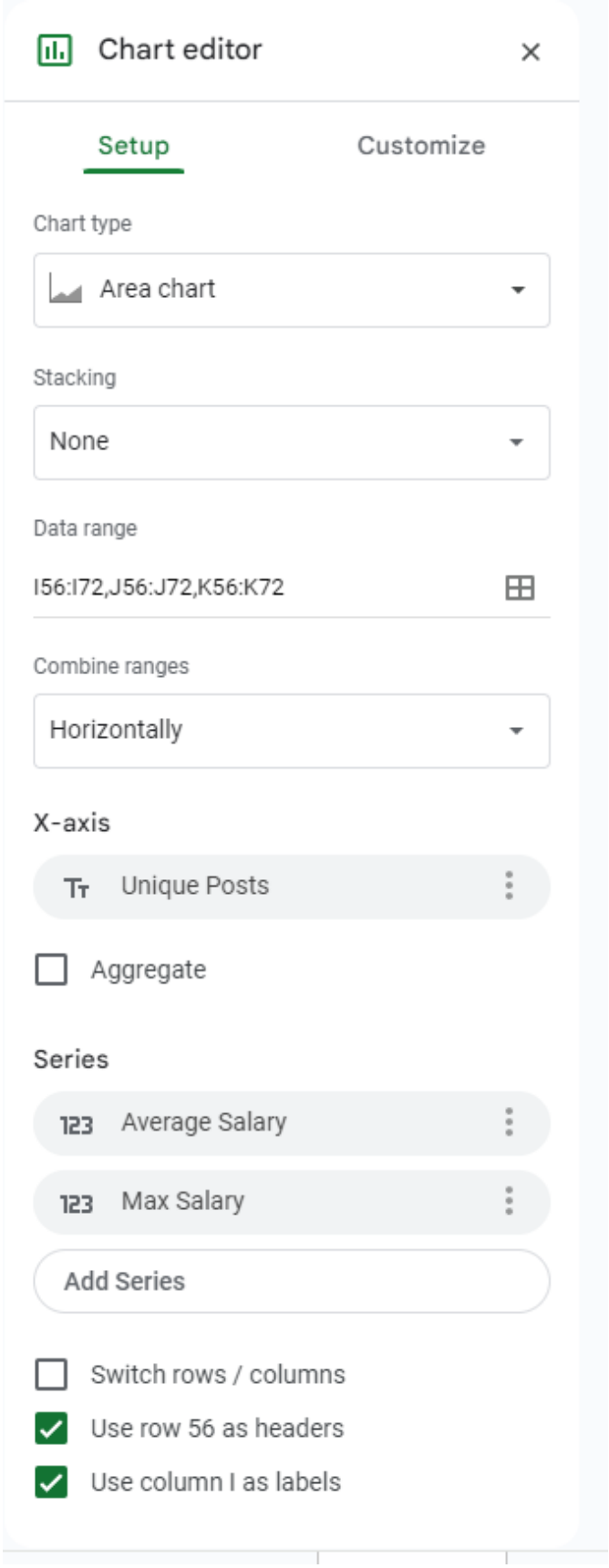
Now, to find how many jobs are there per post can be found using a column chart

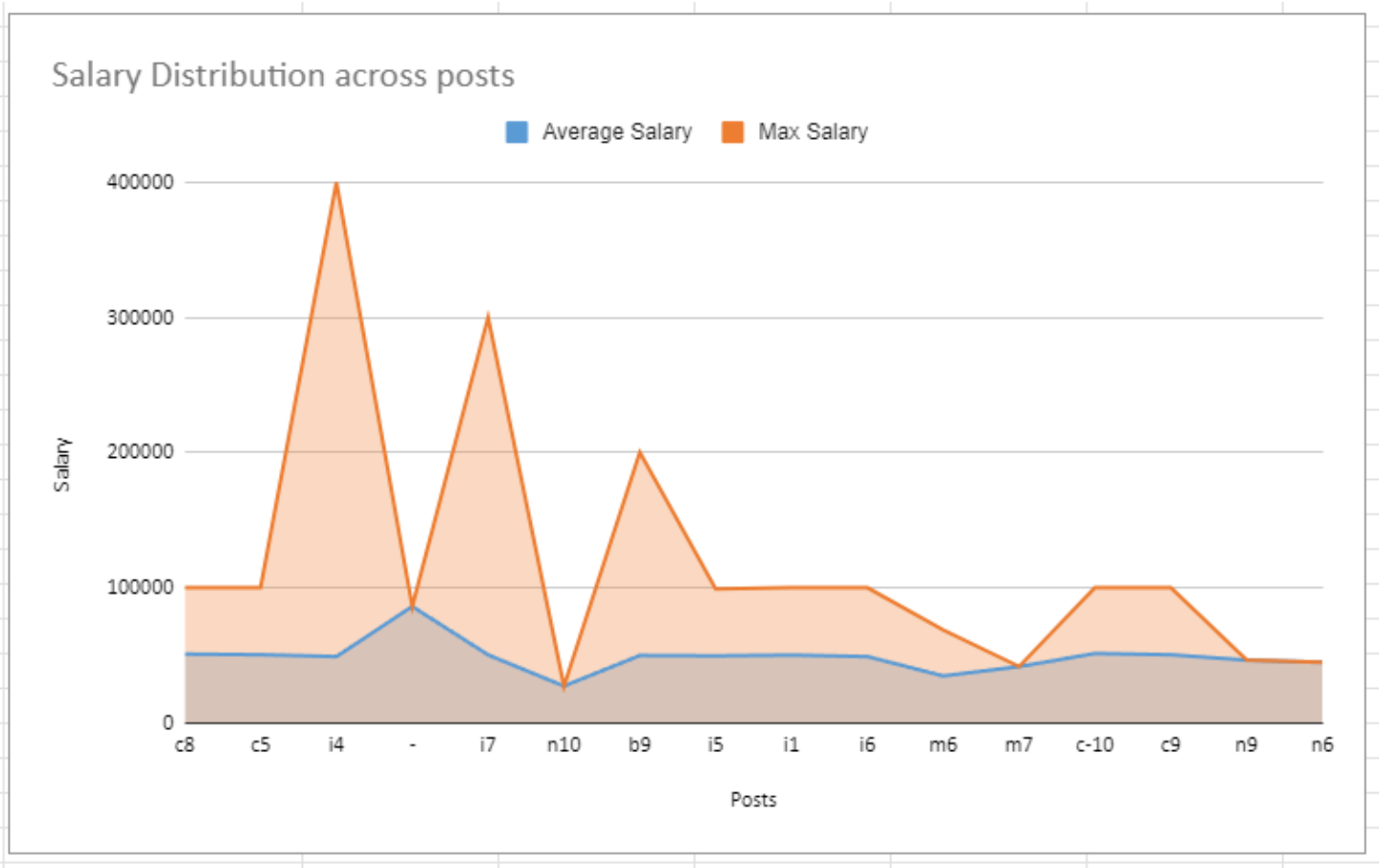






To find distribution of Average and Maximum salary we use data we derived earlier.





This Chart gives Distribution of salary for posts, and makes it easier to understand where the difference between average salary and maximum salary is most.

Results:

While working on this project, I have gained a better understanding of hiring process analytics and Excel fundamentals. By analyzing hiring data, I was able to provide insights on various aspects such as gender gender distribution, average salary, salary distribution, Department size and human resource distribution, salary distribution across various posts.

This project has helped me enhance my Excel skills, particularly in functions and data visualization to derive meaningful insights. It has also improved my ability to interpret data and provide actionable recommendations based on the analysis.