

Hiring Process Analytics

8th July, 2023

Project Description

Hiring process is the fundamental and the most important function of a company. Here, the MNCs get to know about the major underlying trends about the hiring process. Trends such as- number of rejections, number of interviews, types of jobs, vacancies etc. are important for a company to analyze before hiring freshers or any other individual. Thus, making an opportunity for a Data Analyst job here too!

Being a Data Analyst, your job is to go through these trends and draw insights out of it for the hiring department to work upon.

You are working for a MNC such as Google as a lead Data Analyst and the company has provided with the data records of their previous hirings and have asked you to answer certain questions making sense out of that data.

After downloading the dataset, answer the below questions:

1. **Hiring:** Process of intaking people into an organization for different kinds of positions.
Task: How many males and females are Hired ?
2. **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: What is the average salary offered in this company ?
3. **Class Intervals:** The class interval is the difference between the upper class limit and the lower class limit.
Task: Draw the class intervals for salary in the company ?
4. **Charts and Plots:** This is one of the most important parts of analysis to visualize the data.
Task: Draw Pie Chart / Bar Graph (or any other graph) to show proportion of people working different departments ?
5. **Charts:** Use different charts and graphs to perform the task representing the data.
Task: Represent different post tiers using chart/graph?

Approach:

- **Understand the data:**

Gain a thorough understanding of the provided data before delving into analysis. Take the time to familiarize yourself with the data's characteristics and nuances, as this will aid in identifying any potential issues or challenges that may arise during the analysis process.

- **Identify and handle outliers:**

Outliers are data points that deviate significantly from the rest of the data, and they can exert a substantial influence on statistical measures and analysis outcomes. Recognizing and appropriately handling these outliers is crucial, whether by treating them as separate cases or excluding them from the analysis altogether.

- **Insights on findings:**

Present the findings and insights derived from the analysis in a clear and concise manner. Utilize graphs and charts to visually represent the outcomes, ensuring that the information is presented in an organized and easily understandable format. Additionally, it is essential to provide a comprehensive explanation of the methodology employed and the impact of the analysis outcomes to facilitate comprehension and interpretation.

All the above findings are being calculated using **countifs** formula by having multiple criteria range and criteria and **averageifs** formula by selecting a numerical column for averaging and then placing multiple criteria range and criteria.

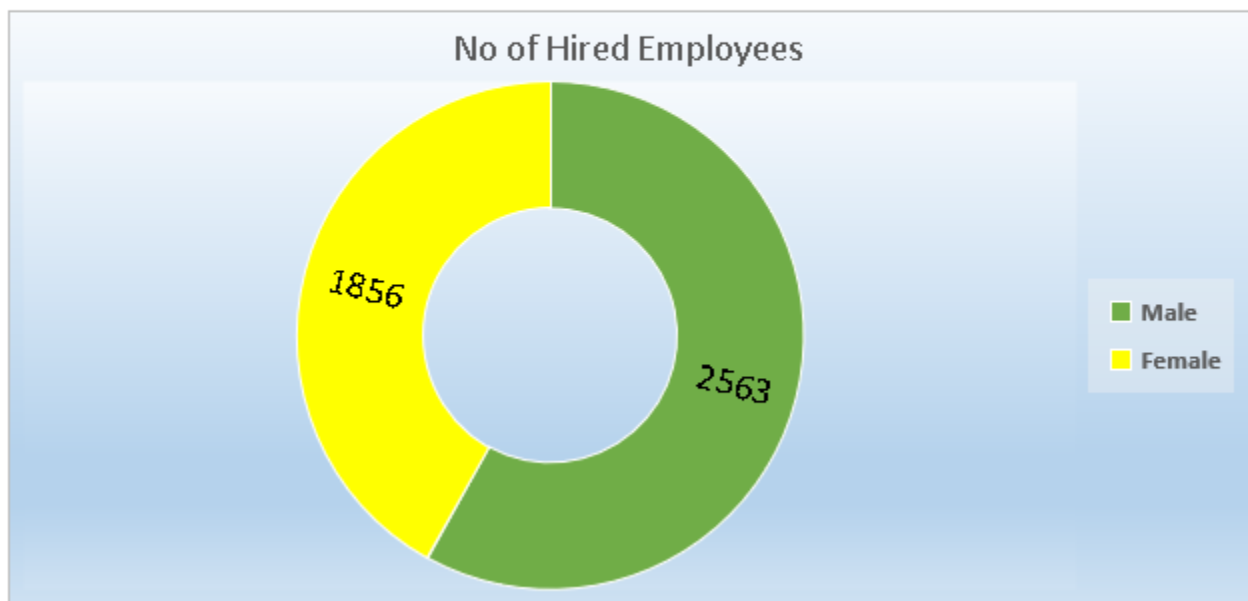
Tech-Stack used:



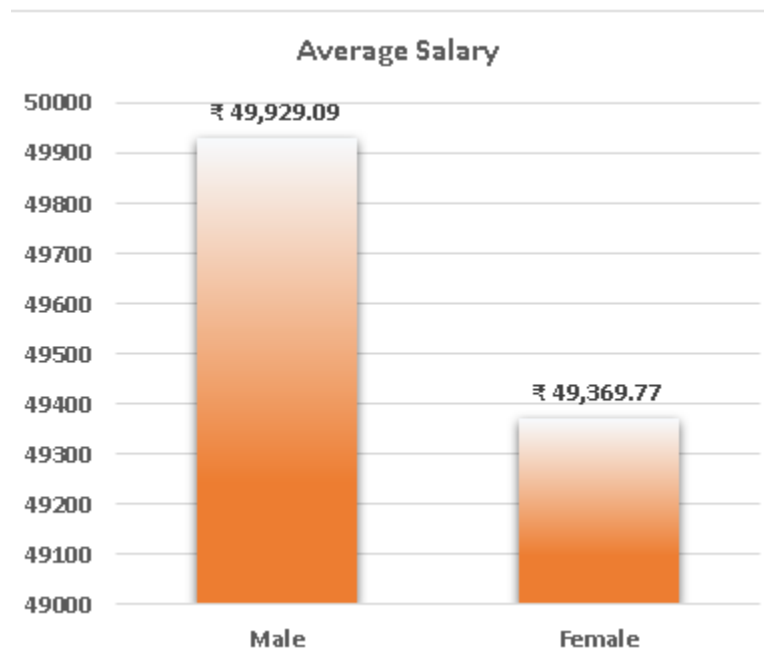
This tool is used for exploring data, analyzing and creating graphical representation of the results and to understand the result set better. The Dataset can be referred from [here](#).

Results and Insights:

Gender	Hired	Average Salary
Male	2563	49929.09364
Female	1856	49369.77371

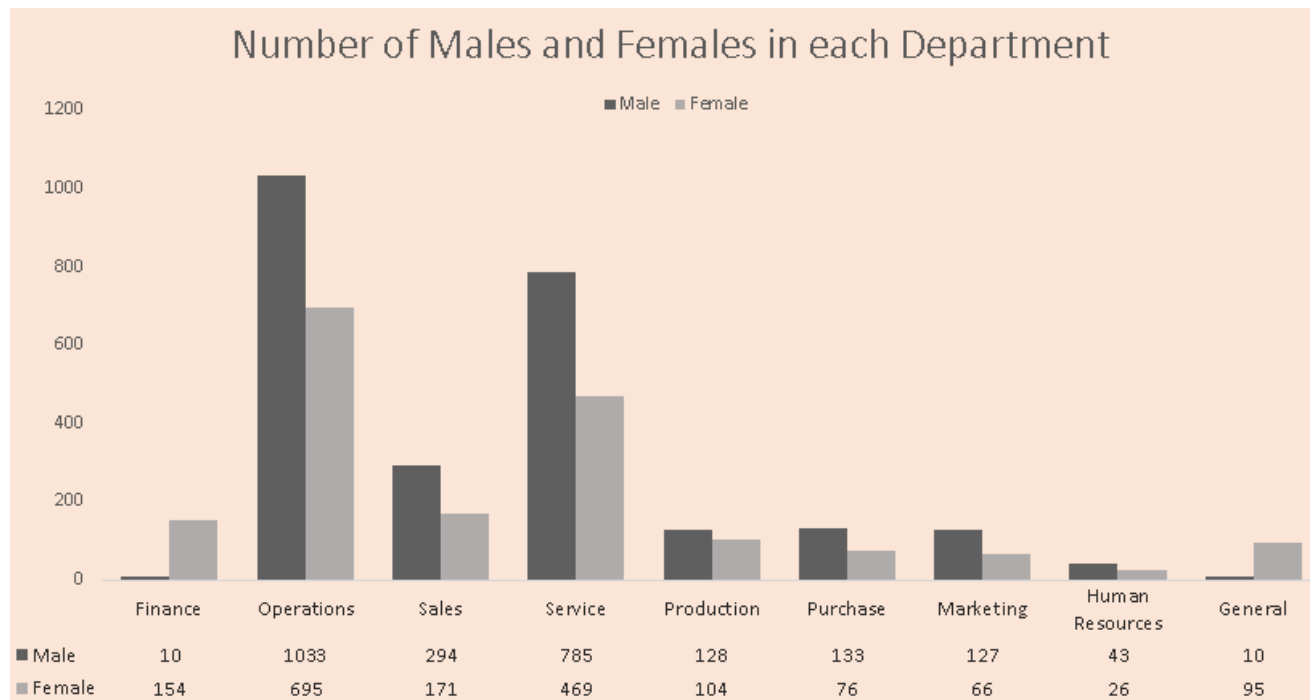


Number of Males has a **Higher** share in the overall Hiring process.

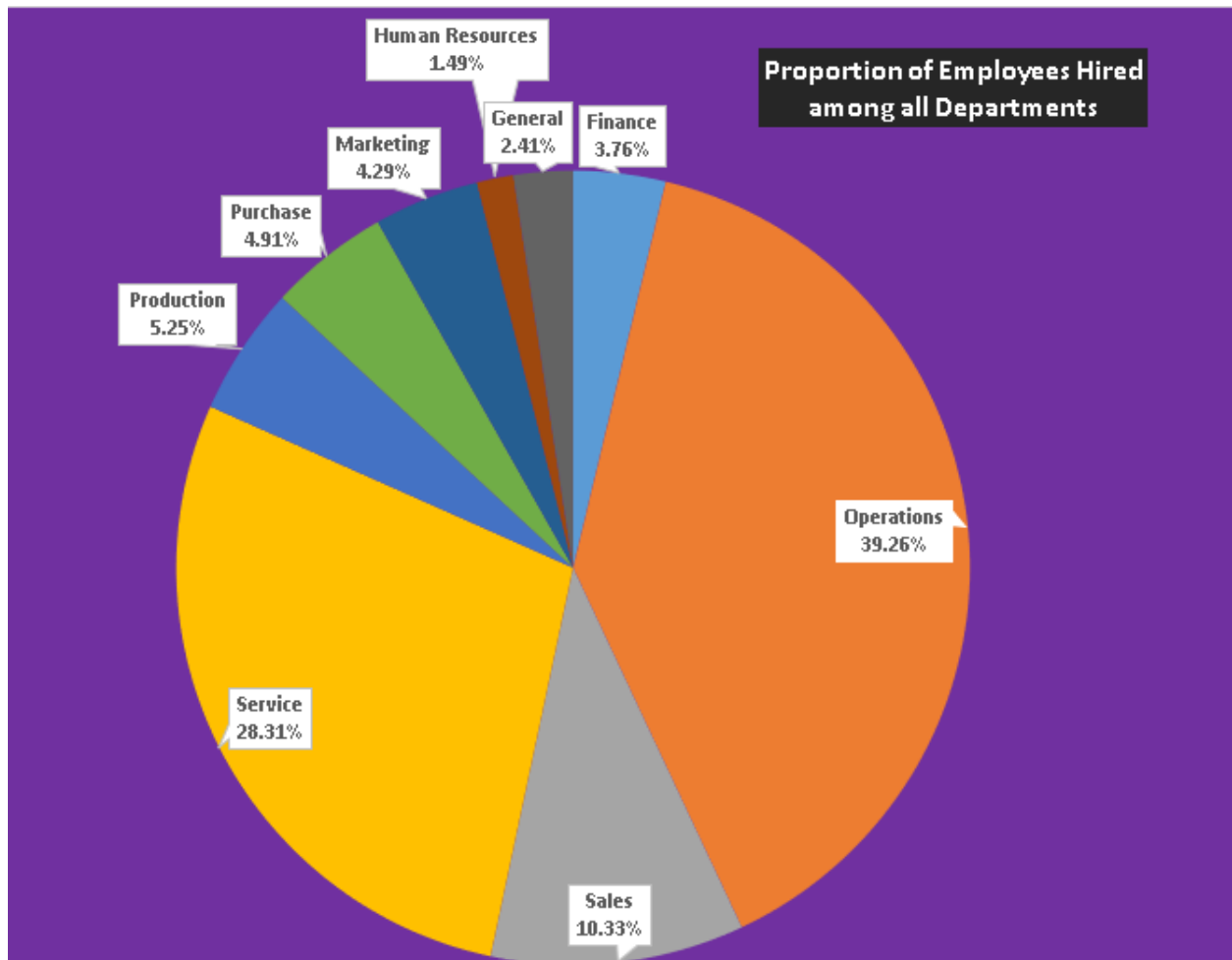


Average Salary offered is also higher in case of **male** employees.

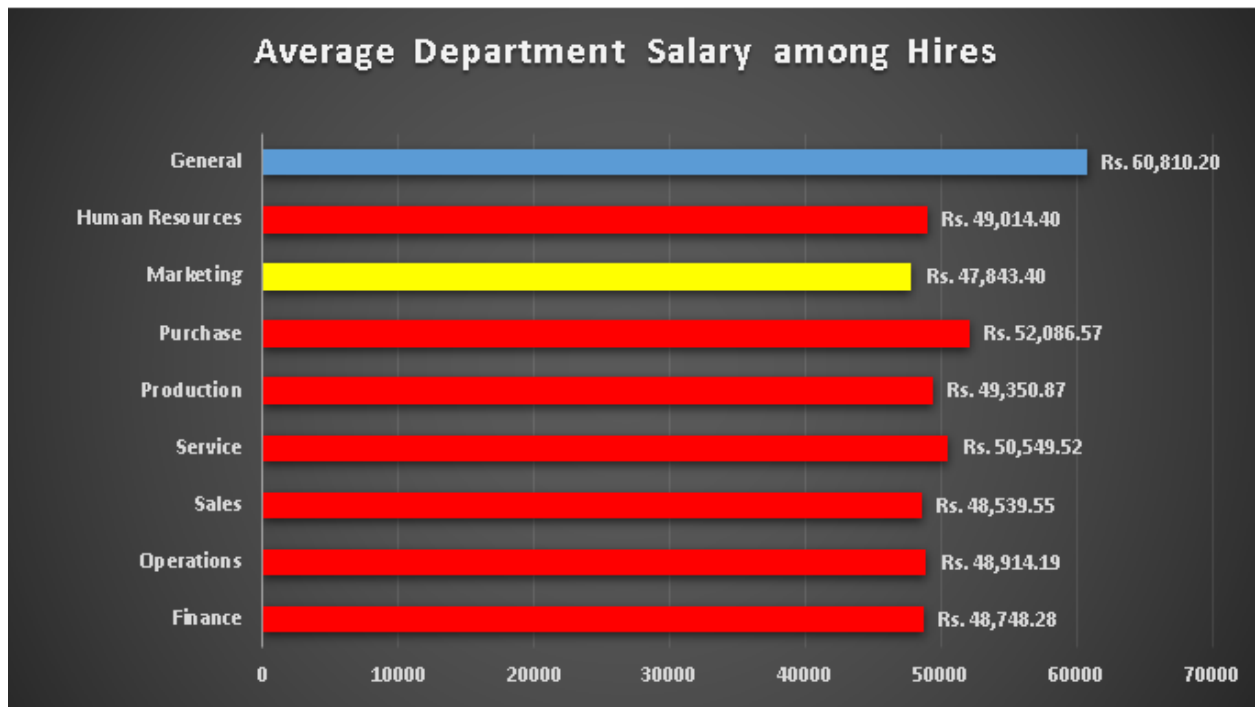
Department	Male	Female
Finance	10	154
Operations	1033	695
Sales	294	171
Service	785	469
Production	128	104
Purchase	133	76
Marketing	127	66
Human Resources	43	26
General	10	95



Clearly, **Operations** Department have the highest number of vacancies for job distribution to both males and females with **Service** department being second highest.

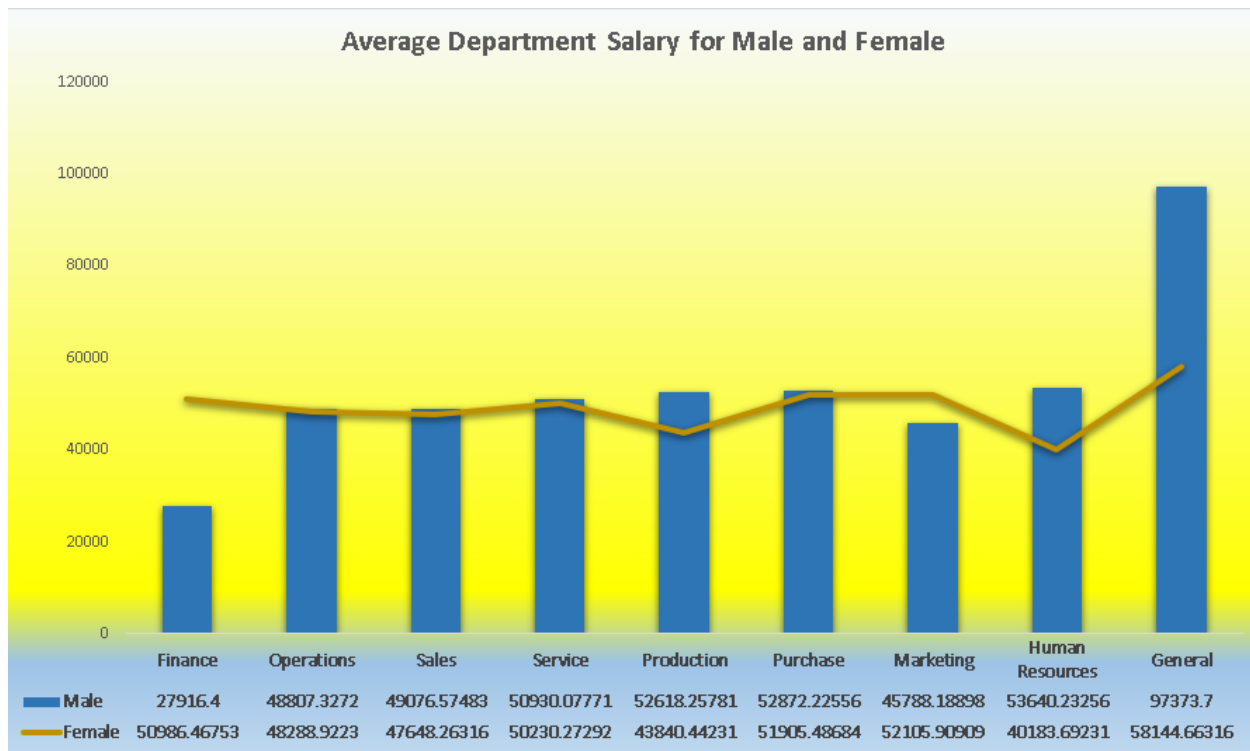


Department	Average Salary
Finance	48748.28409
Operations	48914.19099
Sales	48539.55052
Service	50549.52327
Production	49350.87398
Purchase	52086.57391
Marketing	47843.39604
Human Resources	49014.4
General	60810.20354

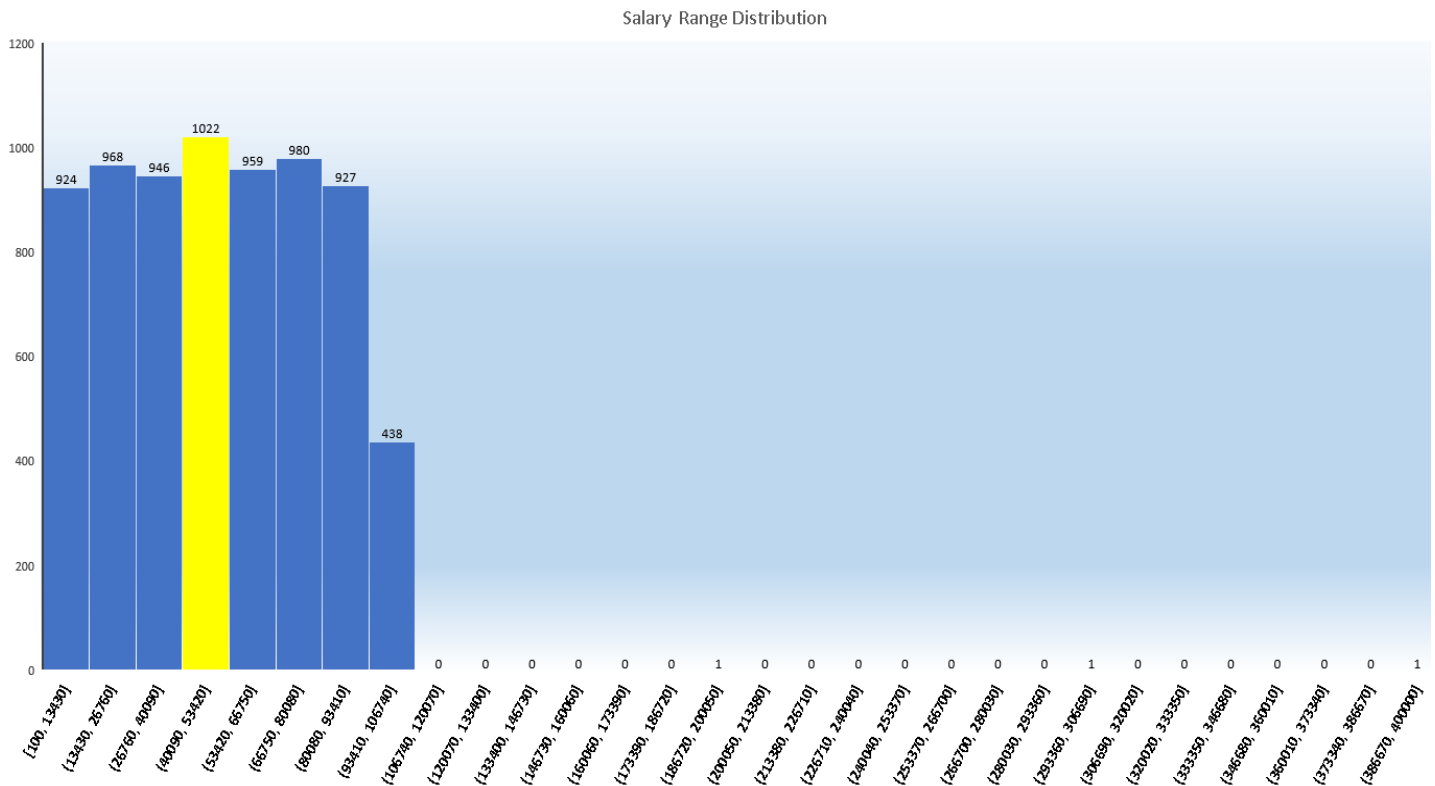


Department	Male	Female
Finance	27916.4	50986.46753
Operations	48807.3272	48288.9223
Sales	49076.57483	47648.26316
Service	50930.07771	50230.27292
Production	52618.25781	43840.44231
Purchase	52872.22556	51905.48684
Marketing	45788.18898	52105.90909
Human Resources	53640.23256	40183.69231
General	97373.7	58144.66316

Average salary offered is highest in the **General** Department and lowest in case of the **Marketing** Department.



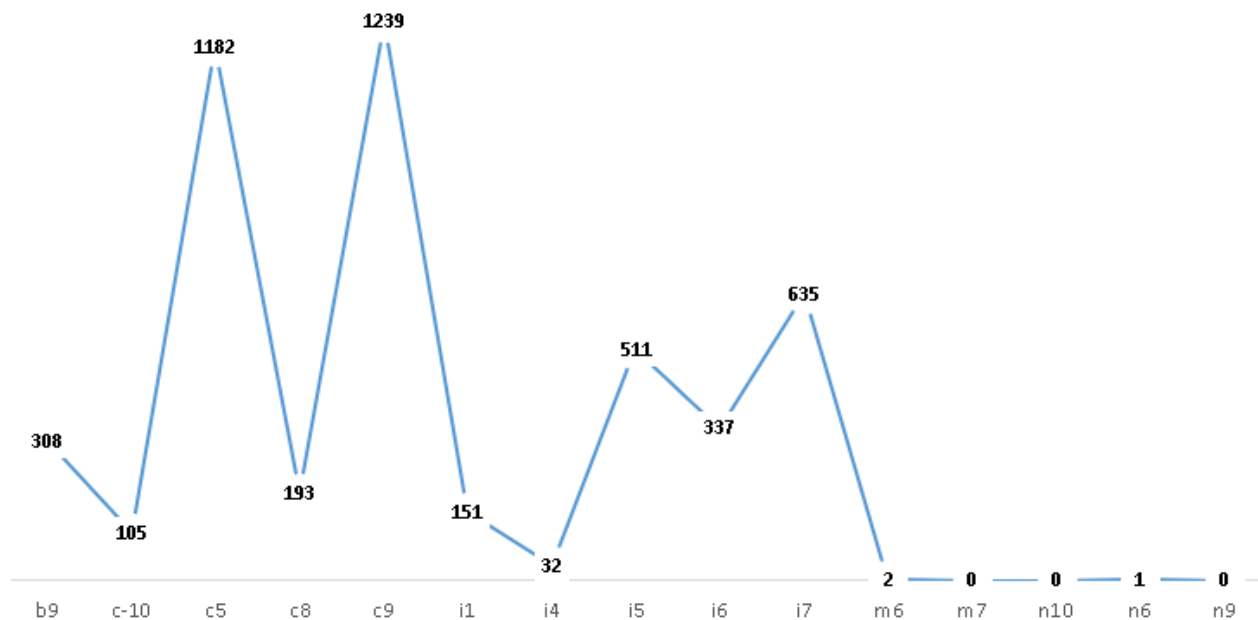
In terms of male and female share of pay, the average department salary offered is almost neck to neck in the majority of departments with **males** having **higher** average salary offered in general, Human Resources and Production Departments and **lower** average salary in Finance and Marketing segments.

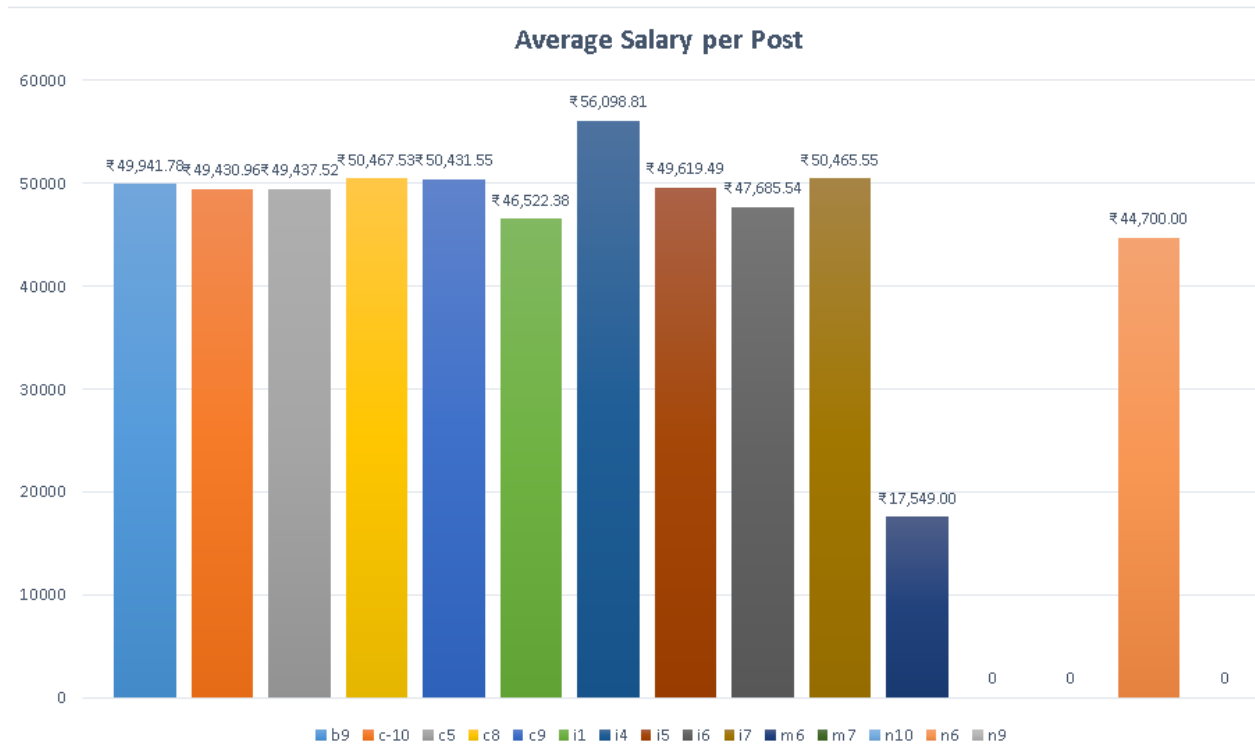


The Salary Distribution graph clearly suggests that the salary offered is highest between 40090 and 53420 range at **1022** number of offers at this range. Also, there are 3 possible outliers in which there are 3 separate salary classes having salaries way beyond the company standards and more than average salary being at the job market. It is very much deviating from other salary classes which you can ignore from analysis.

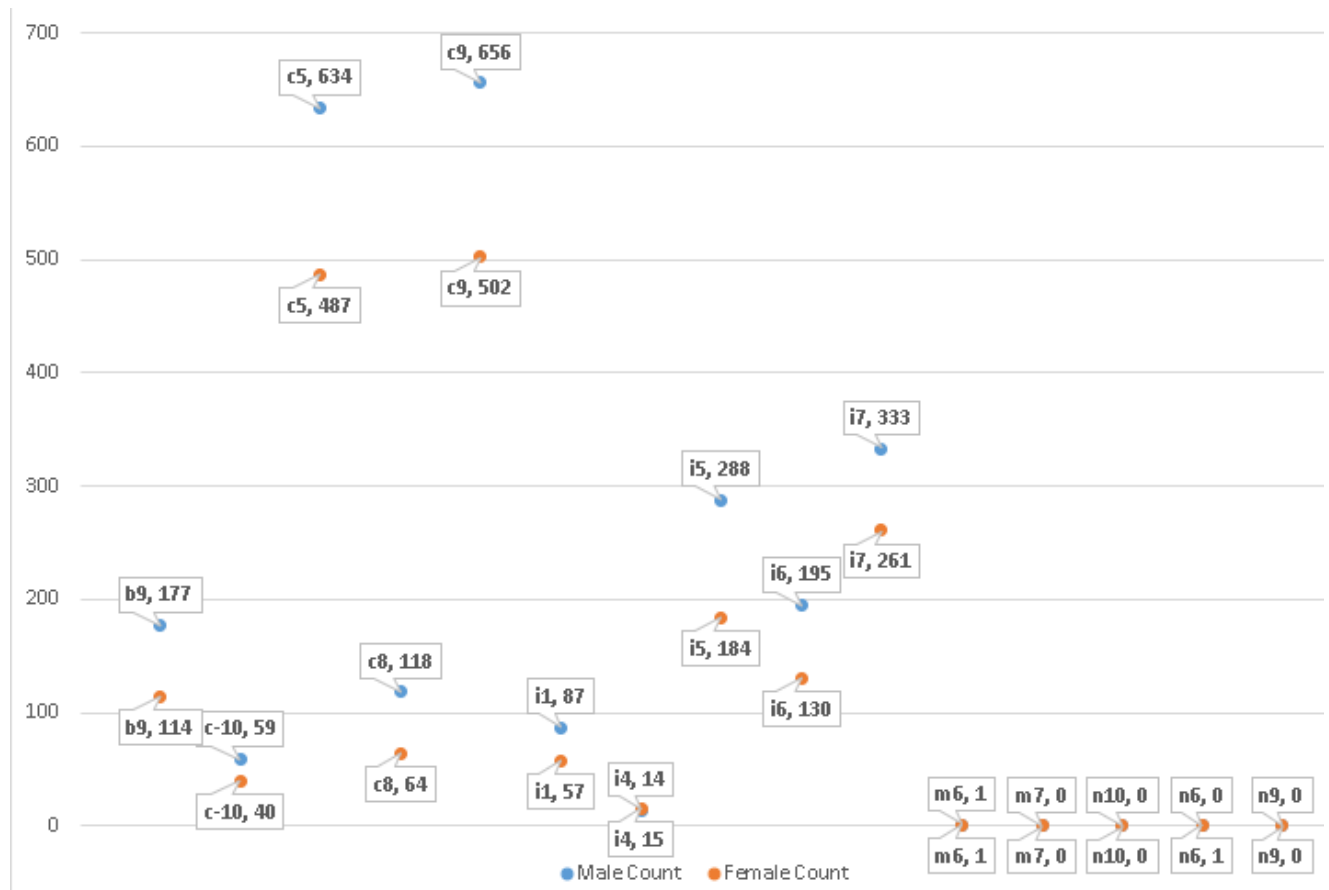
Post Name	Hire Count	Average Salary
b9	308	49941.77597
c-10	105	49430.9619
c5	1182	49437.51861
c8	193	50467.53368
c9	1239	50431.55044
i1	151	46522.38411
i4	32	56098.8125
i5	511	49619.48728
i6	337	47685.54006
i7	635	50465.54961
m6	2	17549
m7	0	0
n10	0	0
n6	1	44700
n9	0	0

COUNT OF HIRES PER POST



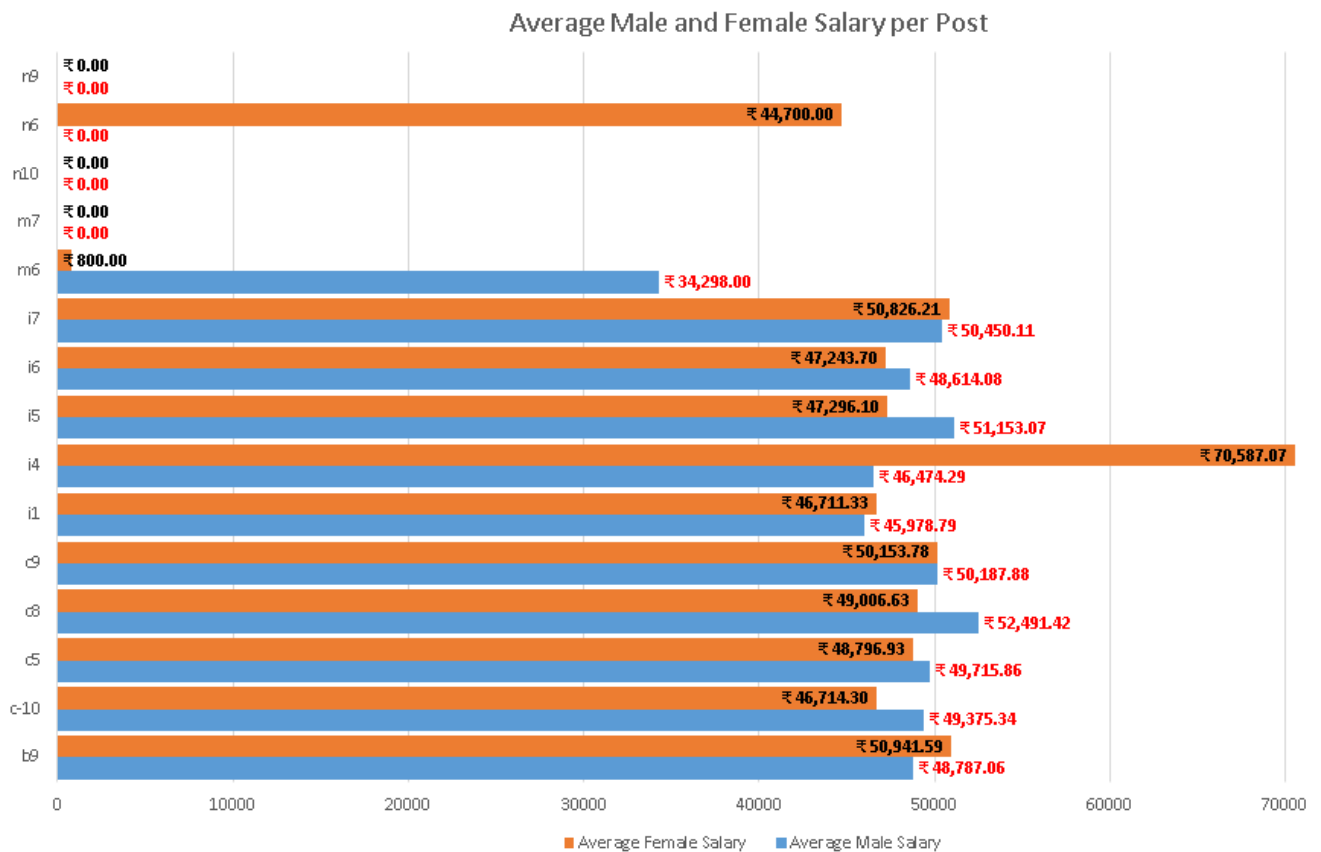



Post Name	Male Count	Female Count
b9	177	114
c-10	59	40
c5	634	487
c8	118	64
c9	656	502
i1	87	57
i4	14	15
i5	288	184
i6	195	130
i7	333	261
m6	1	1
m7	0	0
n10	0	0
n6	0	1
n9	0	0



The most common post being offered is **c5** and **c9**. The average salary for **i4** post is highest among all posts and has reasonably offered fewer posts only to both male and female that too may be having stringent recruitment process to safeguard company's future spendings.

Post Name	Average Male Salary	Average Female Salary
b9	48787.0565	50941.58772
c-10	49375.33898	46714.3
c5	49715.85804	48796.93224
c8	52491.42373	49006.625
c9	50187.87957	50153.78287
i1	45978.7931	46711.33333
i4	46474.28571	70587.06667
i5	51153.06597	47296.10326
i6	48614.08205	47243.7
i7	50450.10811	50826.21456
m6	34298	800
m7	0	0
n10	0	0
n6	0	44700
n9	0	0





I4 post has the highest female average salary, otherwise it is neck-to-neck between both male and female.