

HIRING PROCESS ANALYTICS

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Project description

The hiring process is the fundamental and the most important function of a company. Here, the MNCs get to know about the major underlying trends in the hiring process. Trends such as- the 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! As a Data Analyst, my job is to go through these trends and draw insights out of them for the hiring department. If I am working for an MNC such as Google as a lead Data Analyst and the company has provided me with the data records of their previous hirings and has asked me to answer certain questions making sense out of that data.

approach

1. Understand the data: Before beginning the analysis, I took some time to familiarize myself with the data. Look at the structure of the data and get a sense of the overall content. This helps me identify any potential issues or challenges that I may need to address as I proceed with my analysis.

2. Check for missing or incomplete data: Make sure to check for any blank values or missing data in your dataset.

3. Identify and handle outliers: Outliers are data points that are significantly different from the rest of the data.

They can have a significant impact on summary statistics and can distort the results of your analysis. It's important to identify any outliers and decide how to handle them, such as by excluding them from the analysis or by treating them as separate cases.

4. Communicate your findings: Once completed with analysis, present your findings to your audience in a clear and concise way. Use visualizations, such as charts and graphs, to help communicate

your results. Be sure to clearly explain your methodology and the implications of your results.

Tech stack used

I used MS-EXCEL for this project task.

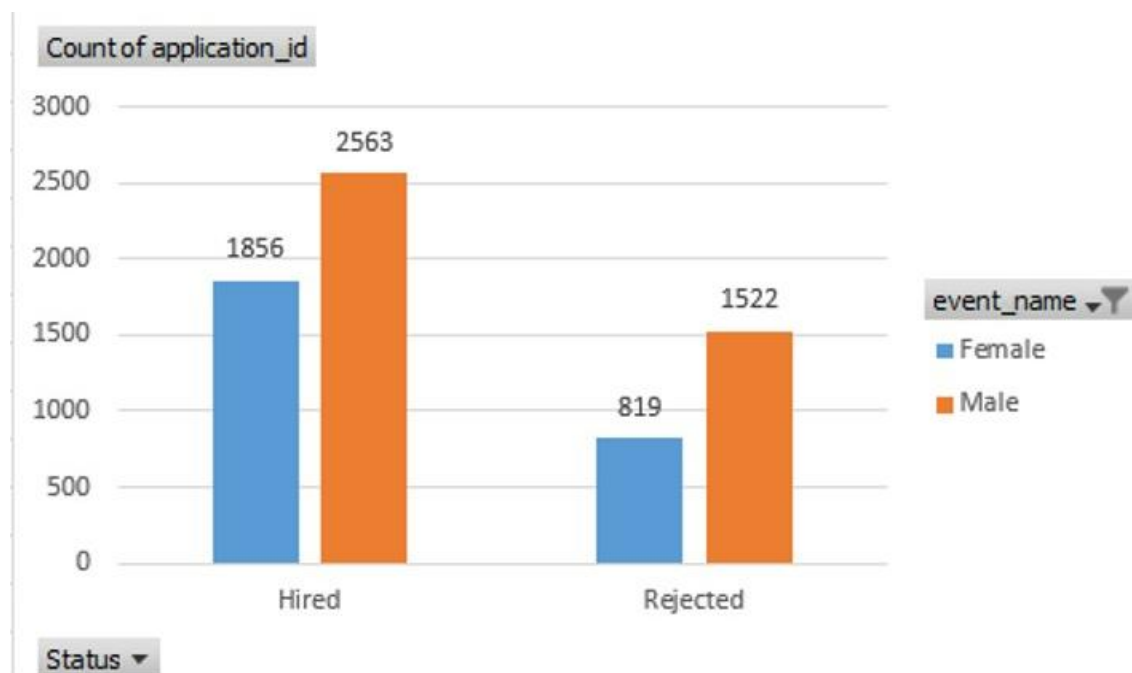
Questions/tasks

1] 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 are Hired?

Solution:



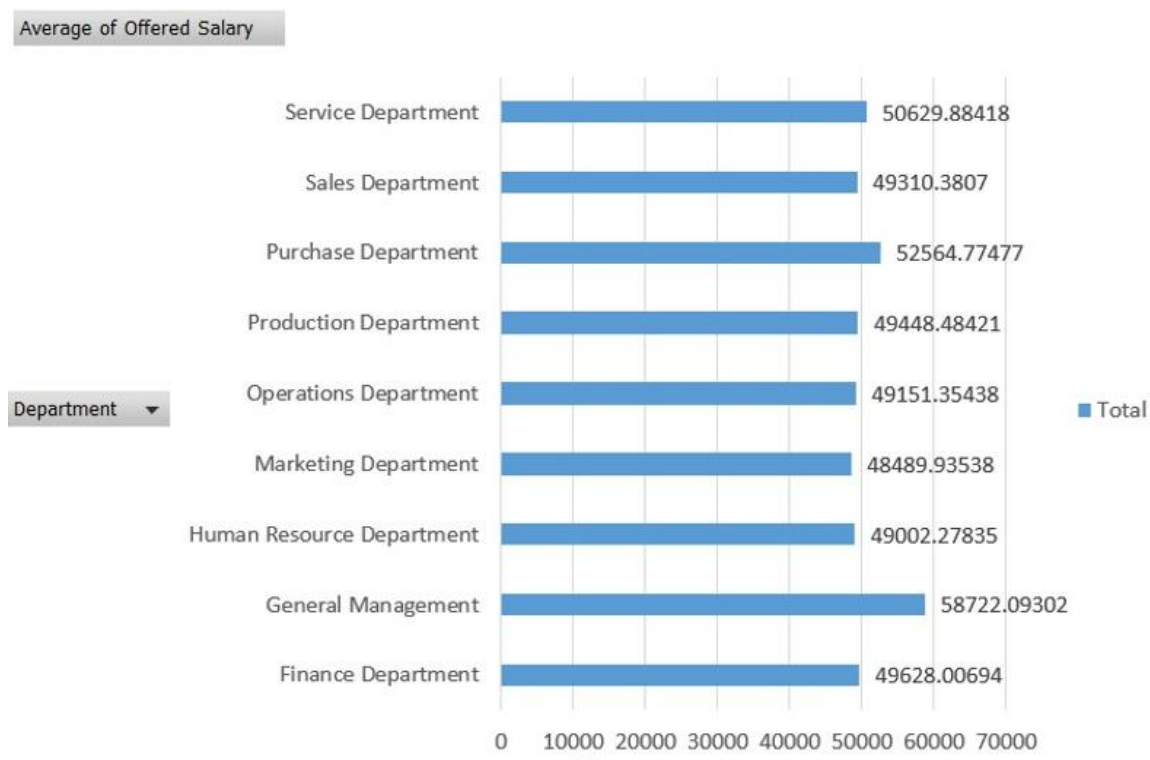
Count of Application_id			
Row Labels	Female	Male	Grand Total
Hired	1856	2563	4419
Rejected	819	1522	2341
Grand Total	2675	4085	6760

From the above bar plot, we can observe that there are a total of 2563 males and 1856 females hired for different positions in the company.

2] 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.

Solution:



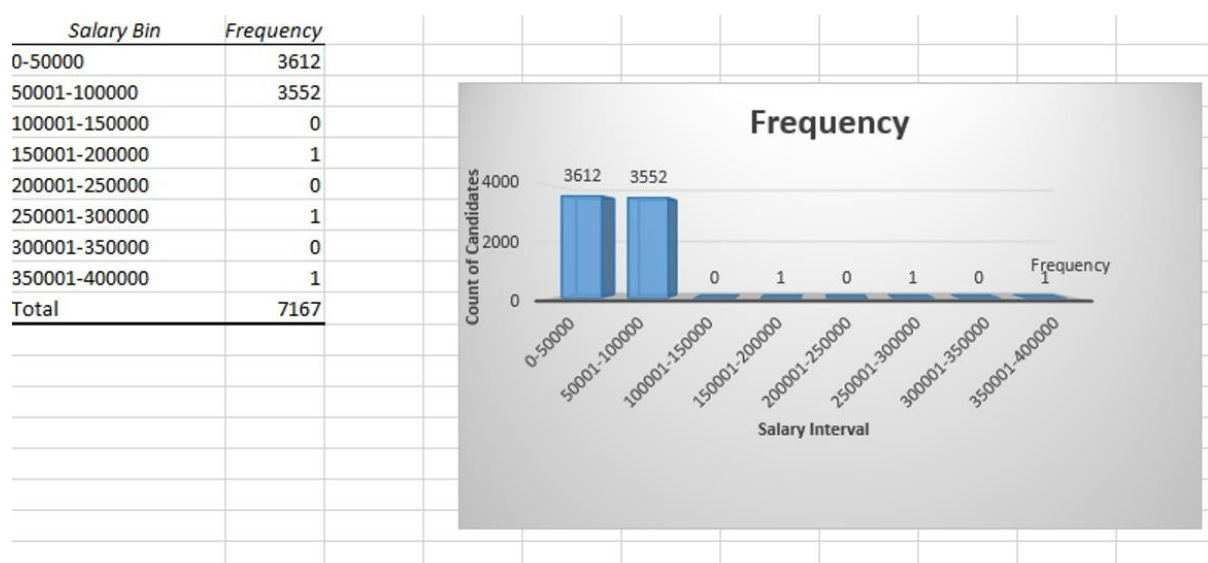
Row Labels	Average of Offered Salary
Finance Department	49628.00694
General Management	58722.09302
Human Resource Department	49002.27835
Marketing Department	48489.93538
Operations Department	49151.35438
Production Department	49448.48421
Purchase Department	52564.77477
Sales Department	49310.3807
Service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

The average salary offered in this company is 49983.02902.

3] 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:



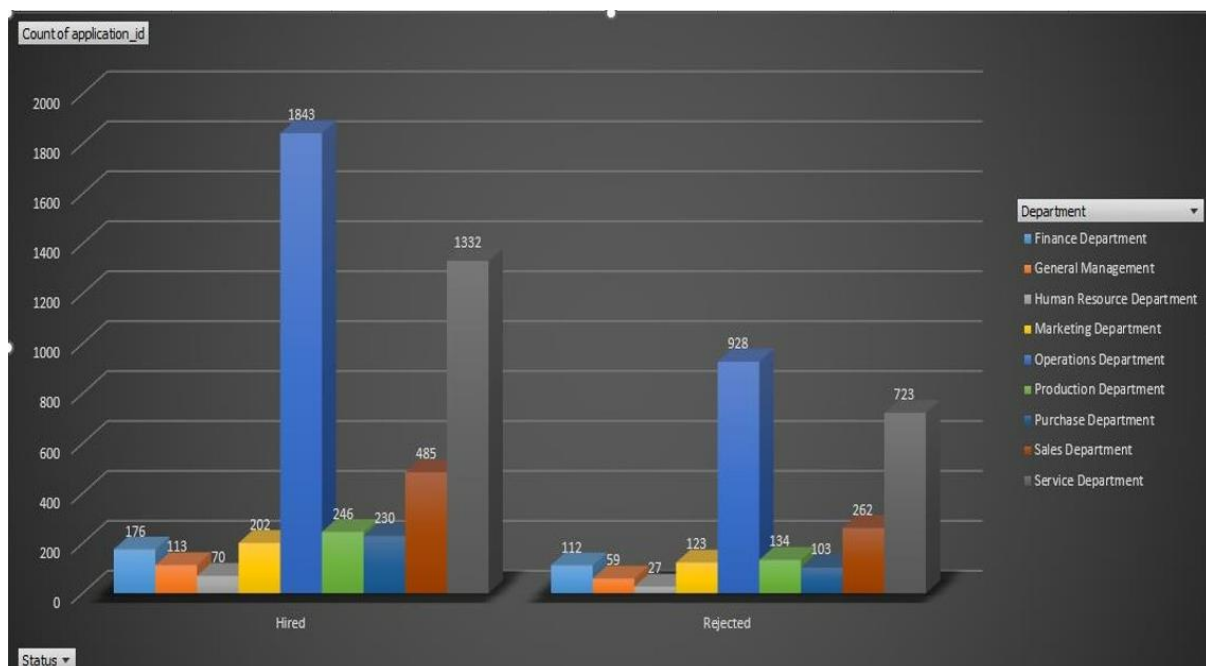
The maximum salary is obtained between range 0-50000.

4] 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:

Count of application_id	Hired	Rejected	Grand Total
Finance Department	176	112	288
General Management	113	59	172
Human Resource Department	70	27	97
Marketing Department	202	123	325
Operations Department	1843	928	2771
Production Department	246	134	380
Purchase Department	230	103	333
Sales Department	485	262	747
Service Department	1332	723	2055
Grand Total	4697	2471	7168



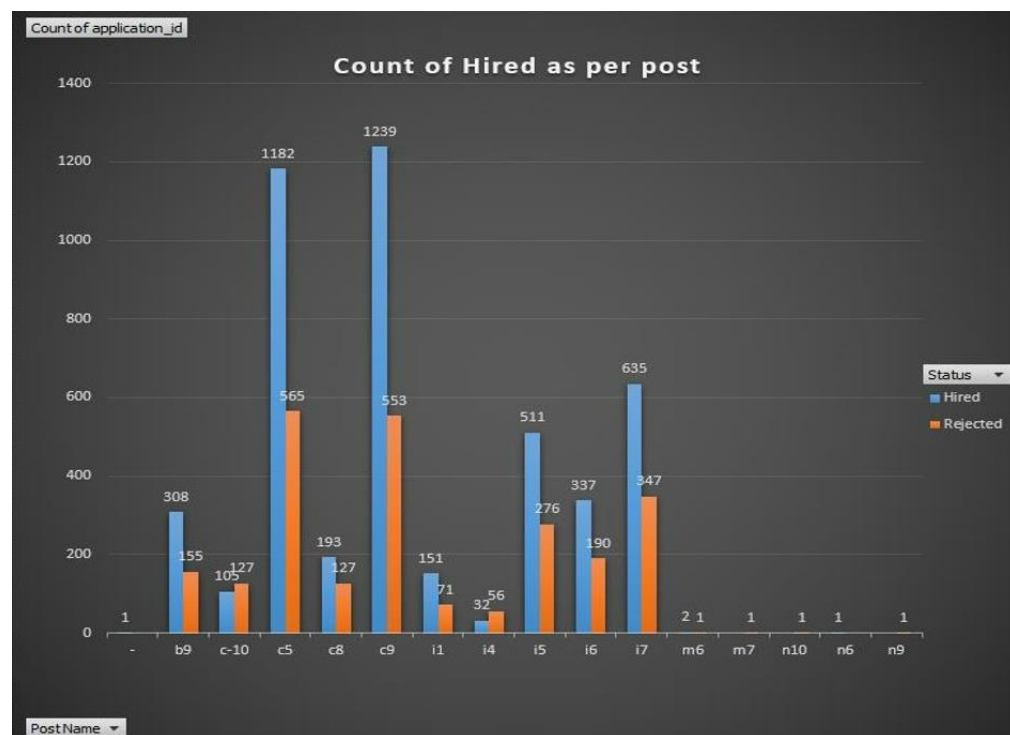
A significant portion of the workforce is concentrated in the operations and service departments.

5] 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.

Solutions:

Count of application_id	Column Labels		
Row Labels	Hired	Rejected	Grand Total
-	1		1
b9	308	155	463
c-10	105	127	232
c5	1182	565	1747
c8	193	127	320
c9	1239	553	1792
i1	151	71	222
i4	32	56	88
i5	511	276	787
i6	337	190	527
i7	635	347	982
m6	2	1	3
m7		1	1
n10		1	1
n6	1		1
n9		1	1
Grand Total	4697	2471	7168



The most common job titles among people in dataset are C9 and C5.



The data includes outliers but they do not effect significantly on average value.

KEY INSIGHTS

- The number of males hired is 2563, while the number of females hired is 1856. This means that there are more males who were hired compared to females.
- If the outliers are included in the calculation, the average salary is 49983.
- The majority of people in the dataset have salaries within the range of 0-50,000.
- A significant portion of the workforce is concentrated in the operations and service departments.
- The most common job titles among the people in the dataset are C9 and C5.

1. Diversity and Inclusion: The gender distribution analysis sheds light on whether there's a gender balance in hires. This could drive initiatives to increase diversity and representation in the workforce.
2. Compensation Strategy: The average salary analysis and salary distribution visualization indicate whether the company's compensation structure is competitive and whether salary disparities exist that need to be addressed.
3. Departmental Efficiency. The departmental analysis offers insights into the relative sizes of different departments. This can guide decisions about resource allocation, potential hiring needs, and restructuring opportunities.
4. Talent Pipeline: The position tier analysis gives a clear view of the distribution of positions across different tiers. It can highlight whether there's a robust talent pipeline for leadership roles or if external hires are more common.
5. Process Optimization: By analyzing the number of rejections, interviews, and vacancies, you could identify potential bottlenecks in the hiring process and areas for improvement in candidate selection or sourcing strategies.
6. Strategic Hiring: Combining insights from all analyses could help the company strategically allocate resources, refine hiring strategies, ensure pay equity, and create a more inclusive and efficient hiring process.