



Hiring Process Analytics

Data Analysis Project

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Trainity Data Analytic Trainee

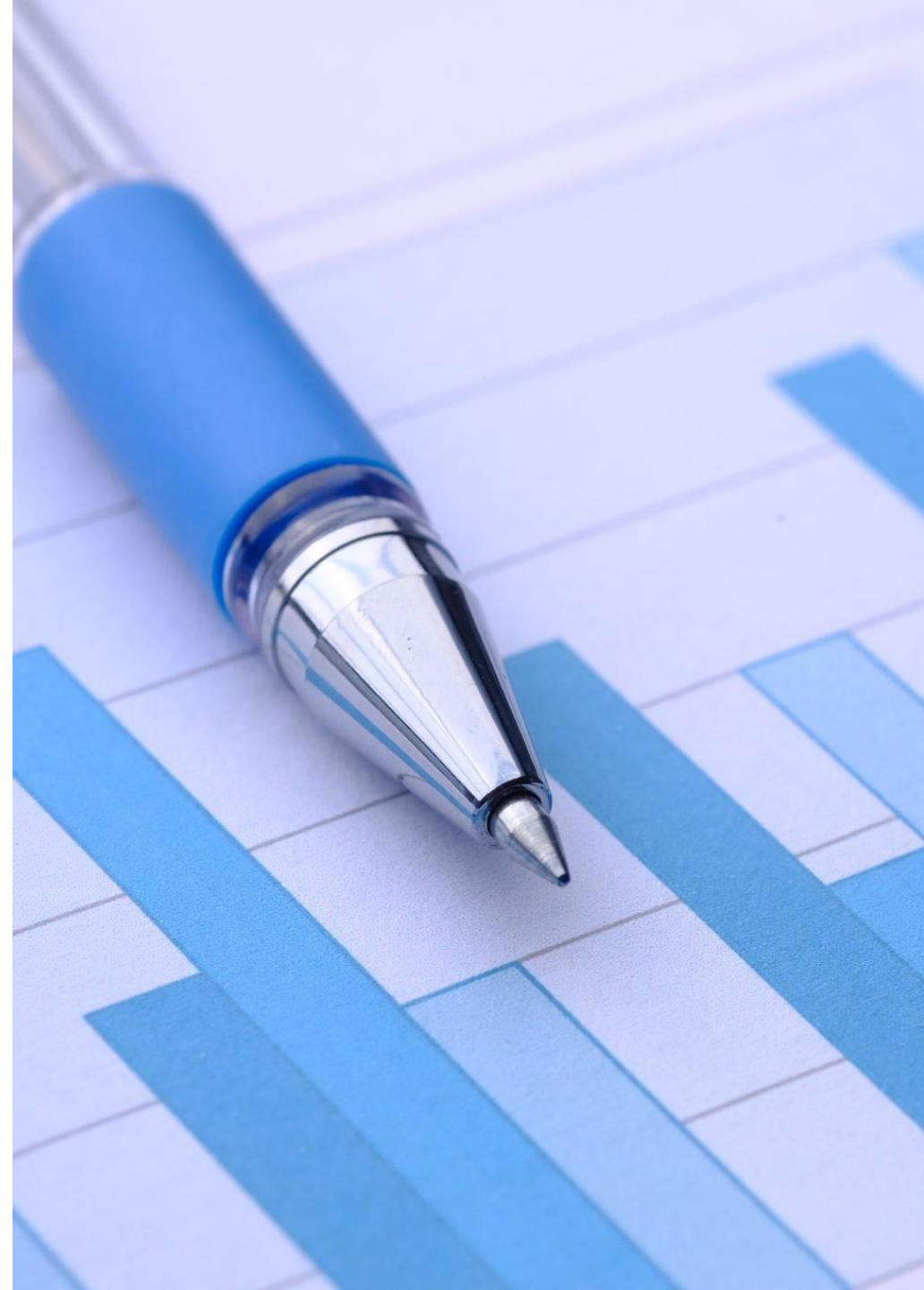
Project Description

Objective: To analyze the hiring process data of a multinational company, uncover trends in hiring, salary, departmental distribution, and provide insights that can improve HR practices.

Dataset: Historical hiring records, including gender, salary, job titles, departments, etc.

Introduction

- The Hiring Process Analytics project aims to analyze recruitment-related data to identify key insights and trends in hiring practices.
- This includes evaluating salary distributions, gender-based hiring patterns, average offered salaries, departmental hiring counts, and position tier distributions.
- Data cleaning and preprocessing were performed in Power Query, followed by analysis using pivot tables and visualizations in Excel.



Tech-Stack Used

Microsoft Excel 365

- Used for data cleaning, statistical computation, visualization (pivot tables, charts, etc.)

Microsoft Powerpoint 365

- Used for creating report.

Data Analytics Tasks



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?

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.

Data Analytics Tasks



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.

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.

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.

Data Cleaning and Preprocessing

Q1	25584.5
Q3	74438
IQR	48853.5
Lower Bound	-47695.75
Upper Bound	147718.25

All data cleaning steps were conducted using Power Query:

- Removed duplicate rows.
- Handled null values by replacing or filtering them appropriately.
- Standardized column names and data types.
- Created conditional columns for status-based filtering.
- Applied outlier detection for salary using the IQR method:
 - Calculated Q1 and Q3.
 - Computed $IQR = Q3 - Q1$.
 - Filtered out salaries below $Q1 - 1.5IQR$ or above $Q3 + 1.5IQR$.

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Data source settings

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Query

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Data Sources

New Query

fx

= Table.SelectRows("#Sorted Rows", each [Offered Salary] <= 147784.5 and [Offered Salary] >= 1000)

	application_id	Interview Date	Interview Time	Status	event_name	Department	Post Name
	<div><div>Valid</div><div>Error</div><div>Empty</div></div> 100%0%0%	<div><div>Valid</div><div>Error</div><div>Empty</div></div> 100%0%0%	<div><div>Valid</div><div>Error</div><div>Empty</div></div> 100%0%0%	<div><div>Valid</div><div>Error</div><div>Empty</div></div> 100%0%0%	<div><div>Valid</div><div>Error</div><div>Empty</div></div> 100%0%0%	<div><div>Valid</div><div>Error</div><div>Empty</div></div> 100%0%0%	<div><div>Valid</div><div>Error</div><div>Empty</div></div> 100%0%0%
1	366299	11-08-2014	02:58:13	Rejected	Male	Marketing Department	c9
2	464899	14-05-2014	11:57:18	Hired	Female	General Management	i7
3	784107	19-05-2014	10:39:51	Hired	Male	Operations Department	c9
4	699493	15-07-2014	11:34:41	Rejected	Male	Service Department	c8
5	365930	01-07-2014	12:18:15	Hired	Female	Finance Department	c5
6	926938	01-05-2014	07:50:27	Hired	Female	Service Department	c8
7	766041	01-08-2014	09:32:19	Rejected	Male	Service Department	i6
8	185368	27-06-2014	18:42:07	Rejected	Male	Service Department	c5
9	300037	10-06-2014	09:32:01	Hired	Female	Service Department	b9
10	296052	29-05-2014	14:43:35	Hired	Female	Finance Department	c5
11	535514	22-07-2014	11:39:48	Hired	Male	Operations Department	c5
12	347068	08-05-2014	15:03:18	Hired	Male	Operations Department	c9
13	861850	11-06-2014	13:01:28	Hired	Male	Operations Department	b9
14	169266	20-08-2014	18:51:07	Rejected	Female	Service Department	c9
15	990318	24-05-2014	07:09:33	Hired	Female	Production Department	i6
16	45162	19-05-2014	00:05:18	Hired	Don't want to say	Operations Department	i4
17	239190	20-06-2014	12:59:14	Rejected	Male	Operations Department	c9
18	47896	21-08-2014	17:46:33	Rejected	Male	Service Department	b9
19	504811	14-05-2014	15:17:01	Hired	Male	Purchase Department	i6
20	772086	16-07-2014	18:21:18	Hired	Female	Operations Department	c9
21	943922	24-06-2014	17:47:16	Hired	Male	Operations Department	i7
22	490577	26-08-2014	18:47:33	Hired	Male	Service Department	i5

Query Settings

PROPERTIES

Name

Hiringdata

All Properties

APPLIED STEPS

Source

Changed Type

Replaced Value

Removed Duplicates

Split Column by Delimiter

Changed Type1

Renamed Columns

Changed Type2

Removed Blank Rows

Replaced Value1

Sorted Rows

Filtered Rows

8 COLUMNS, 999+ ROWS

Column profiling based on top 1000 rows

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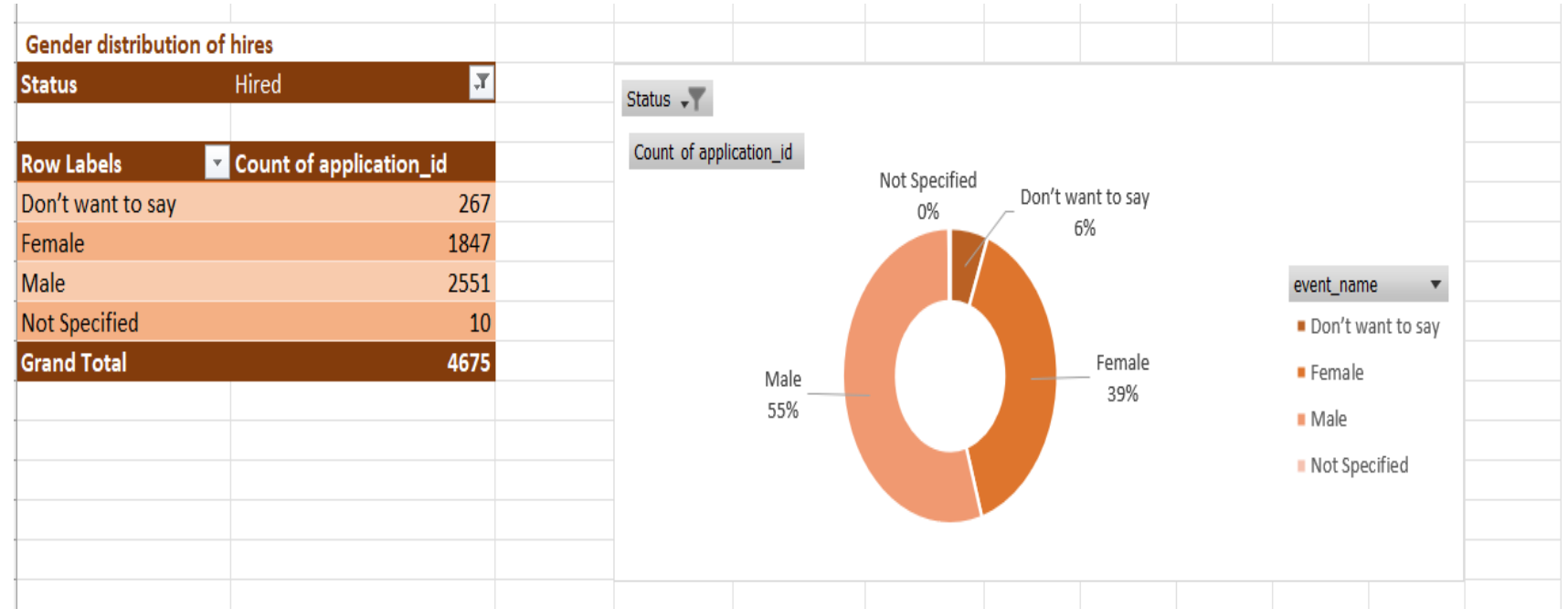
Descriptive Statistics

These statistics provide an overview of the salary range and its variability in the dataset.

Data Summary	
Count	7135
Mean	49918.73693
Mode	20666
Median	49636
Minimum	1007
Maximum	99967
Standard Deviation	28339.90332

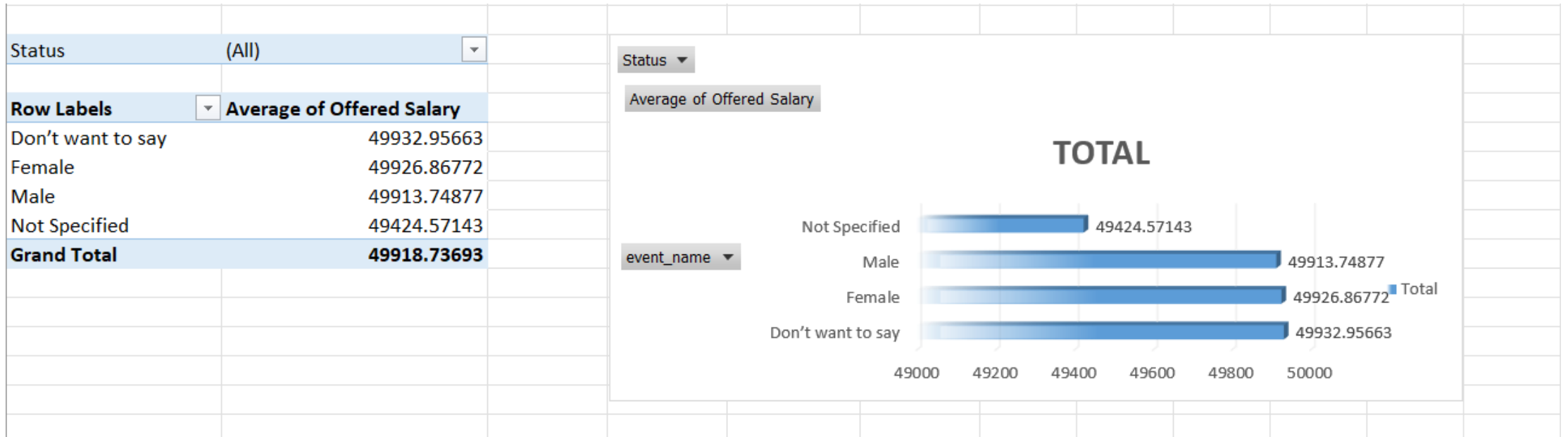
Gender Distribution of Hires

- Male: 55%
- Female: 39%
- Others/Not specified: 6%
- The organization has a male-dominant hiring pattern. The share of female hires is significant but lags behind.



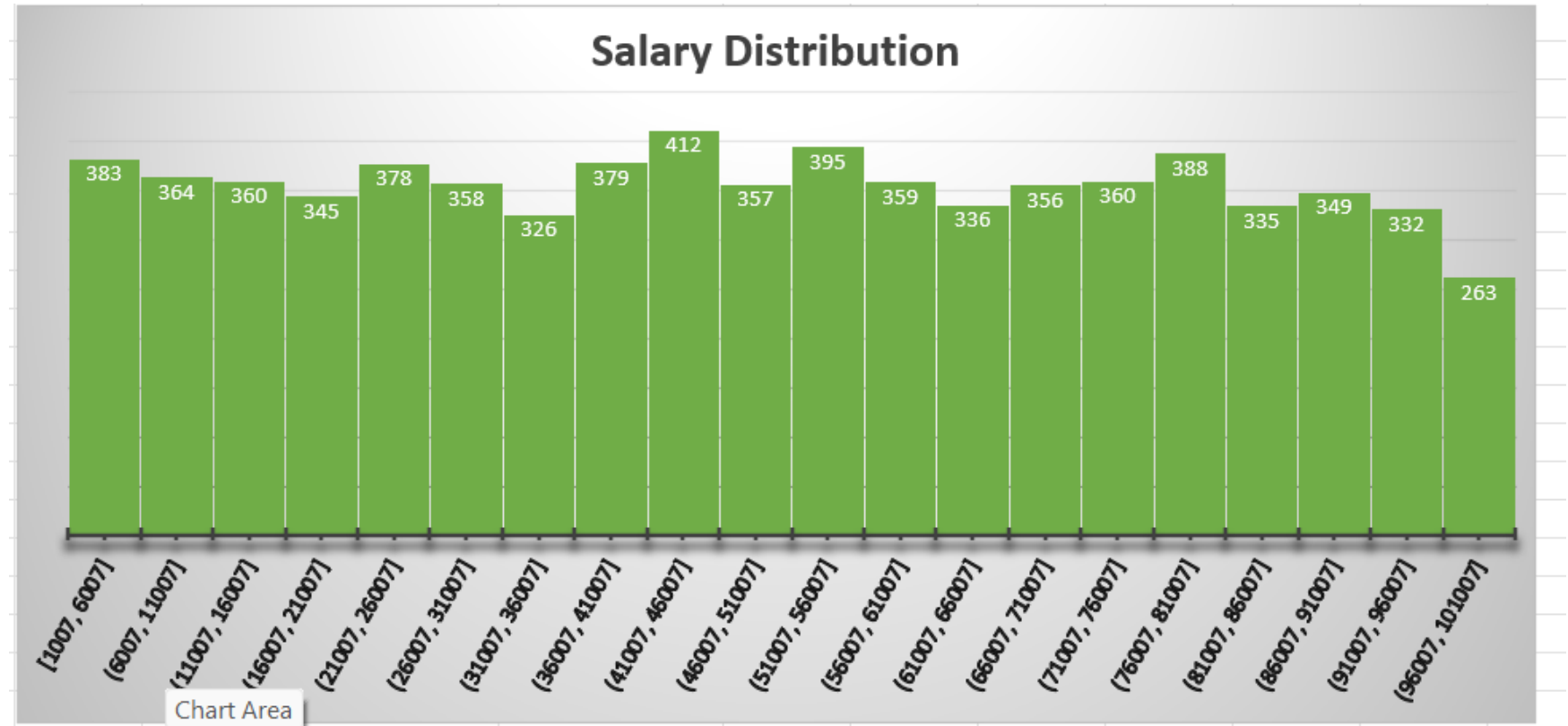
Average Salary by Gender

- Average offered salary is quite consistent across gender identities.
- Slight variation (~₹20–₹30 difference), which is negligible statistically.
- Suggests no obvious gender-based bias in salary offers, which is a positive sign for equitable pay practices.



Salary Distribution

- Most of the offered salaries fall within the ₹40,007–₹60,007 range, with peaks around ₹46,007–₹50,007 and ₹50,007–₹56,007.
- The salary distribution is relatively even with a slight peak in the mid-ranges. There's a steep drop in the ₹96,007–₹1,00,007 bracket, indicating fewer high-end offers.



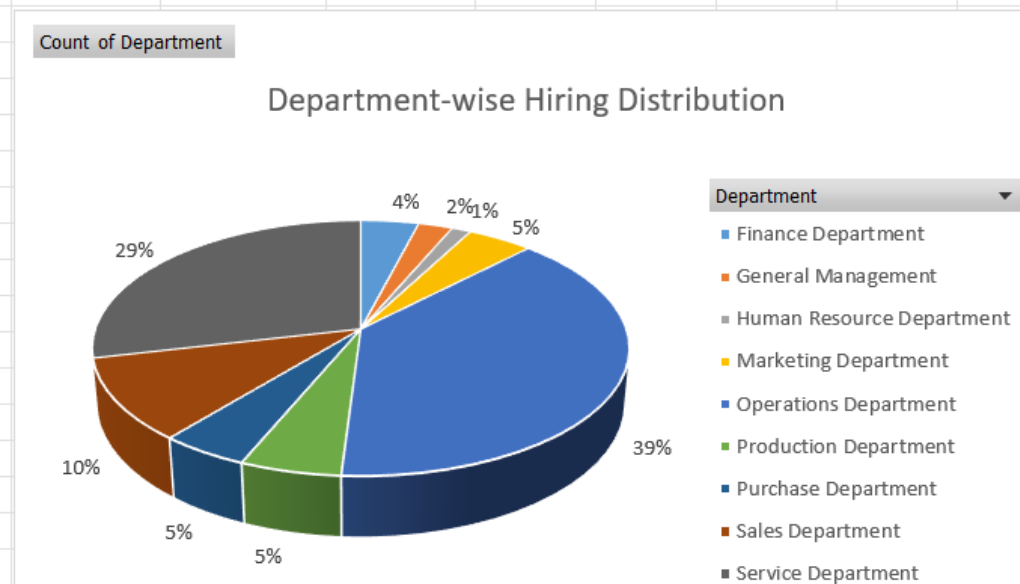
Department-Wise Hiring

Top Departments:

- Operations (39%)
- Service (29%)
- Other departments like Sales (10%), Production (5%) follow behind.

Operations and Service dominate the hiring, likely indicating company focus areas or workforce needs..

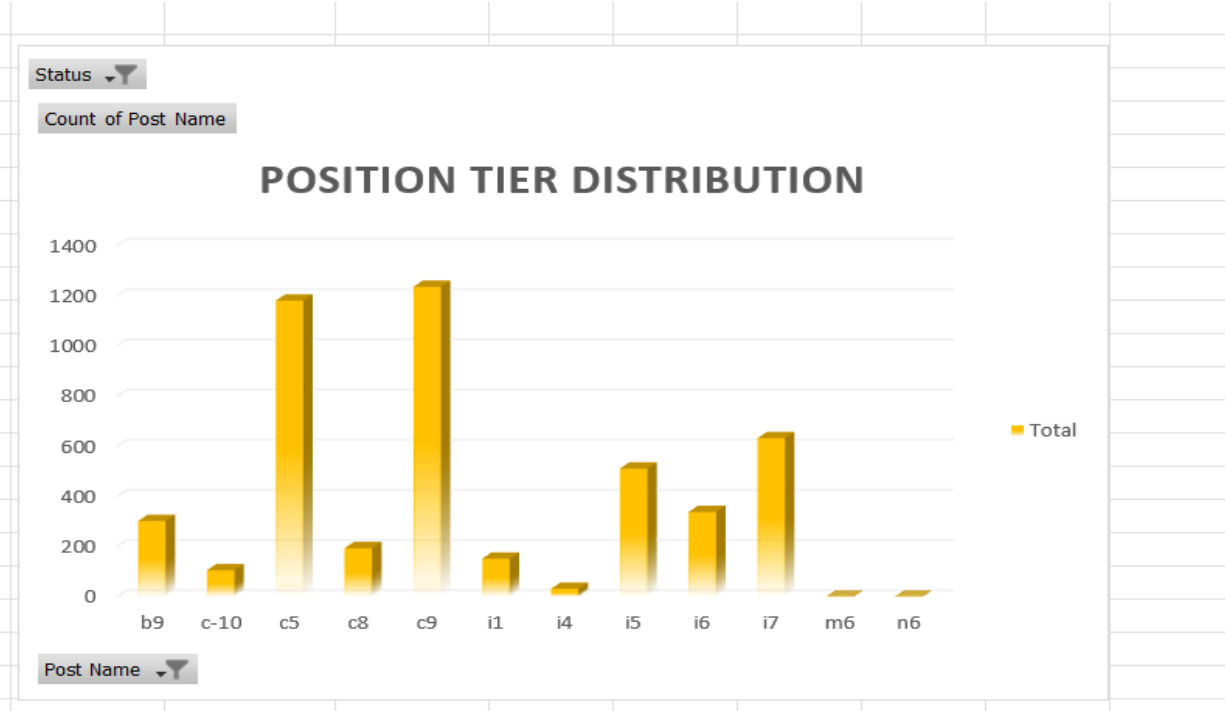
Row Labels	Count of Department
Finance Department	287
General Management	169
Human Resource Department	96
Marketing Department	325
Operations Department	2762
Production Department	379
Purchase Department	332
Sales Department	743
Service Department	2042
Grand Total	7135



Position Tier Distribution

- Most common roles: c5 (1179), c9 (1234), i7 (631)
- Some tiers (m6, n6) have minimal hires, suggesting rare or special positions.
- Clear hiring focus on a few select tiers. You could further explore job responsibilities per tier in the full report.

Status	Hired
Row Labels	Count of Post Name
b9	301
c-10	105
c5	1179
c8	193
c9	1234
i1	151
i4	31
i5	510
i6	337
i7	631
m6	1
n6	1
Grand Total	4674



Conclusion

- This analysis highlights key aspects of the hiring process.
- The company focuses majorly on operational roles with balanced salary offerings across genders.
- A few tiers dominate the hiring pattern, indicating preferred positions or recurring needs.
- These insights can guide recruitment strategy and workforce planning.

Drive Link:

https://docs.google.com/spreadsheets/d/1KDUSkzg2JgkgjVab0P8_rZVifzMxmlB6/edit?usp=sharing&ouid=112959782025131466050&rtpof=true&sd=true

