

PROJECT-4

Hiring Process Analytics

Statistics

Project description:

As a data analyst, this project involves analyzing the hiring process data of a multinational company, such as Google, to derive valuable insights that can optimize recruitment strategies. The dataset includes records on job types, vacancies, interviews, and rejections.

Using Excel and statistical methods, I will clean, organize, and process the data, identifying key patterns such as rejection rates, interview success rates, and job vacancy trends. Also to provide insights by visualizing data through charts and graphs, that can improve hiring decisions and streamline recruitment efforts. The analysis will help the company make data-driven decisions to enhance the efficiency of the hiring process.

Approach:

- The first step in this analysis will be handling missing data by identifying any gaps in the dataset and deciding the most appropriate strategy to manage them, such as removing incomplete records or imputing missing values.
- Next, I will simplify the dataset by clubbing columns where multiple categories can be combined, which will streamline the analysis and provide clearer insights.
- Outlier detection will be crucial to ensure the data is not skewed by extreme values. Based on the nature and impact of the outliers, I will either remove, replace, or retain them.
- Once the dataset is clean, I will summarize the data by calculating relevant statistical measures such as averages and medians and generating visualizations to uncover trends related to rejections, interviews, job types, and vacancies.

This comprehensive analysis will help in deriving insights that can inform the company's recruitment strategy, leading to a more efficient and data-driven hiring process.

Tech-Stack Used: Microsoft Excel 2019

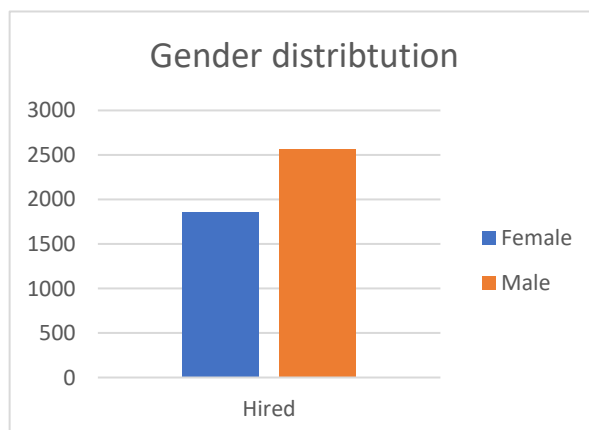
Excel is an excellent tool for handling, analyzing, and visualizing datasets of moderate size. It offers functionalities for data cleaning and statistical analysis.

Excel's built-in charts and pivot tables are useful for creating visual representations like bar charts, pie charts, and histograms, which help in understanding trends in the dataset related to rejections, interviews, job types, and vacancies.

Data Analytics Tasks:

A. Hiring Analysis: Determine the gender distribution of hires. How many males and females have been hired by the company?

Count of new_event_name		Column Labels	
Row Labels	Female	Male	Grand Total
Hired	1854	2562	4416
Grand Total	1854	2562	4416



Insights: The chart shows the gender distribution of hires. 2562 males and 1854 females have been hired by the company.

B. Salary Analysis: What is the average salary offered by this company? Use Excel functions to calculate this.

Function used to calculate the average salary offered by the company

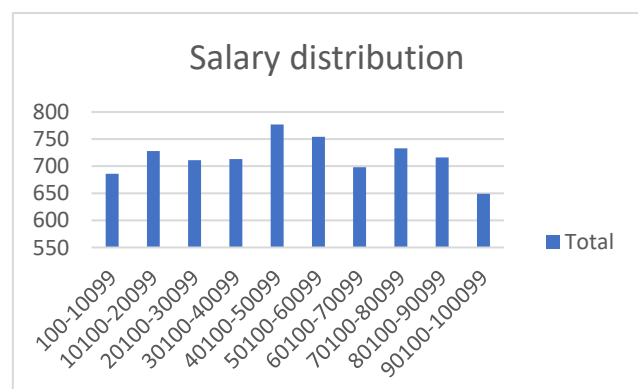
=Average (H2:H7166)

Output: **49878.3464**

Insight: The average salary that is offered by the company is approximately 49878.

C. Salary Distribution: Create class intervals for the salaries in the company. This will help you understand the salary distribution.

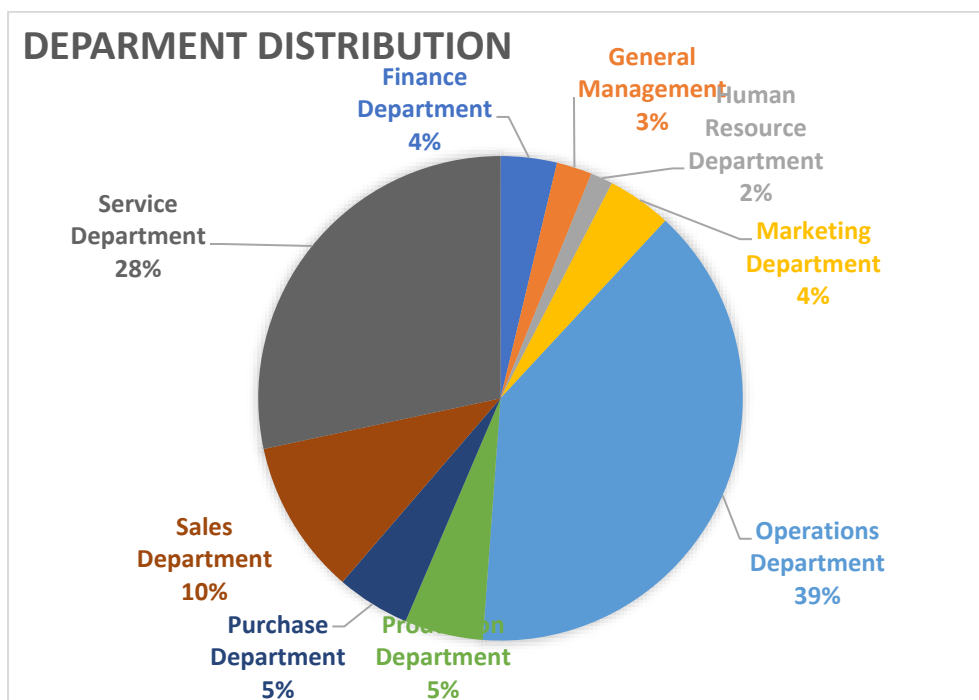
Row Labels	Count of Offered Salary
100-10099	686
10100-20099	728
20100-30099	711
30100-40099	713
40100-50099	777
50100-60099	754
60100-70099	698
70100-80099	733
80100-90099	716
90100-100099	649
Grand Total	7165



Insights: The above table shows the salary distribution in company and charts helps us to understand how distribution is visually. A balanced distribution shows a well-compensated workforce across all levels. This analysis helps in assessing pay structure and workforce composition.

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

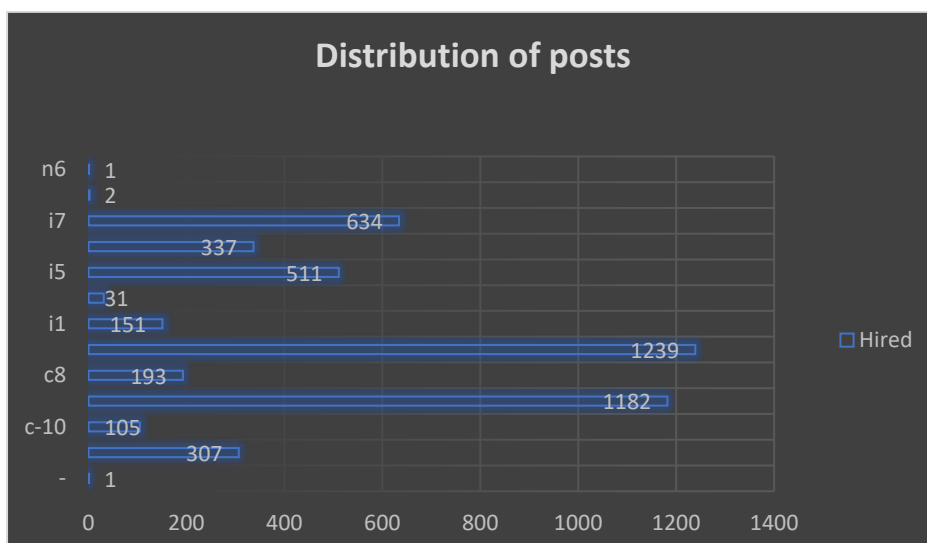
Count of application_id	Column Labels
Row Labels	Hired
Finance Department	3.75%
General Management	2.36%
Human Resource Department	1.49%
Marketing Department	4.30%
Operations Department	39.26%
Production Department	5.24%
Purchase Department	4.90%
Sales Department	10.33%
Service Department	28.36%
Grand Total	100.00%



Insights: The above pie chart shows the proportion of people working in different departments. 39% the highest proportion of people are working in operations department and with 2% the lowest proportion of people are working in human resource department.

E. Position Tier Analysis: 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.

Count of application_id	Column Labels
Row Labels	Hired
-	1
b9	307
c-10	105
c5	1182
c8	193
c9	1239
i1	151
i4	31
i5	511
i6	337
i7	634
m6	2
n6	1
Grand Total	4694



Insights: The above graph shows the distribution of positions across different tiers. The position tier analysis shows how employees are distributed across various levels within the organization.

Result: From this project, gained valuable insights into the company's hiring process, identifying trends such as the number of rejections, interviews, and job vacancies. By handling missing data, detecting and managing outliers, I have more streamlined dataset to work with. Using statistical analysis, I was

able to calculate key metrics such as the average number of interviews per hire or the rejection rate, which will help inform future hiring strategies. The visualizations created provide insights that can improve decision-making in the hiring process, optimize recruitment efforts, and ensure better allocation of resources.

Drive link: For the Excel Sheet file [click this text](#).