Hiring Process Analytics

Hiring process analytics refers to the process of analyzing data related to the hiring process in order to gain insights and improve recruitment outcomes. By analyzing data such as applicant sources, candidate demographics, time-to-hire, and cost-per-hire, organizations can identify areas for improvement in their hiring process and make data-driven decisions to optimize their recruitment efforts.

Some key metrics that can be used in hiring process analytics include:

1. Time-to-hire: This measures the time it takes from the start of the recruitment process to the date the new employee starts. A longer time-to-hire can indicate inefficiencies in the recruitment process.
2. Cost-per-hire: This measures the cost of the recruitment process per new hire. It includes expenses such as job postings, agency fees, and recruiter salaries.
3. Applicant sources: This measures the effectiveness of different sources of applicants, such as job boards, employee referrals, and social media.
4. Candidate demographics: This measures the diversity of candidates in terms of gender, race, ethnicity, and other factors. A lack of diversity can indicate biases in the recruitment process.

By analyzing these metrics and other data related to the hiring process, organizations can identify areas for improvement and make data-driven decisions to optimize their recruitment efforts. For example, they might identify that employee referrals are the most effective source of applicants and invest more resources in that area. Or they might identify a lack of diversity among candidates and implement strategies to improve diversity and reduce bias in the recruitment process.

I am using Microsoft Excel to find the answers for the questions asked and here is a report on my findings in the dataset given for the 4th project-

Exploratory Data Analysis:

application_id (Column- A): Unique application number(id) for every applicant's application
Interview Taken on (Column- B): Date and Time on which the Interview was conducted
Status (Column- C): Hired or Rejected
event_name (Column- D): Gender preference of applicant
Department (Column- E): Department in which applicant prefers to be hired
Post Name (Column- F): Name of post for which applicant has applied
Offered Salary (Column- G): Salary offered to the applicant by the company

TASK 1: Hiring -

event_name	hired_people
Male	2563
Female	1856
NULL	10
Don't want to say	268

Query-

Males =COUNTIFS(C2:C7169, "Hired", D2:D7169, "Male")
Females =COUNTIFS(C2:C7169, "Hired", D2:D7169, "Female")
NULL =COUNTIFS(C2:C7169, "Hired", D2:D7169, "-")
Don't want to say =COUNTIFS(C2:C7169, "Hired", D2:D7169, "Don,Äôt want to say")

TASK 2: Average Salary-

Average Salary offered = 49983.02902

event_name	average_salary_offered
Male	49935.4062
Female	50088.5073
NULL	46136.2667
Don't want to say	49906.7913

Query-

Total average salary =AVERAGE(G2:G7169)
Male average salary =AVERAGEIF(D2:D7169, "Male", G2:G7169)
Female average salary =AVERAGEIF(D2:D7169, "Female", G2:G7169)
NULL average salary =AVERAGEIF(D2:D7169, "-", G2:G7169)
Don't want to say average salary =AVERAGEIF(D2:D7169, "Don,Äôt want to say" , G2:G7169)

TASK 3: Class Interval -

salary_range	people
$100 - $40,090	1876
$40,091 – $80,080	1948
$80,081 – $120,070	870
$120,071 - $160,060	0
$160,061 - $200,050	1
$200,051 - $240,040	0
$240,041 - $280,030	0
$280,031 - $320,020	1
$320,021 - $360,010	0
$360,011 - $400,000	1

Logic-

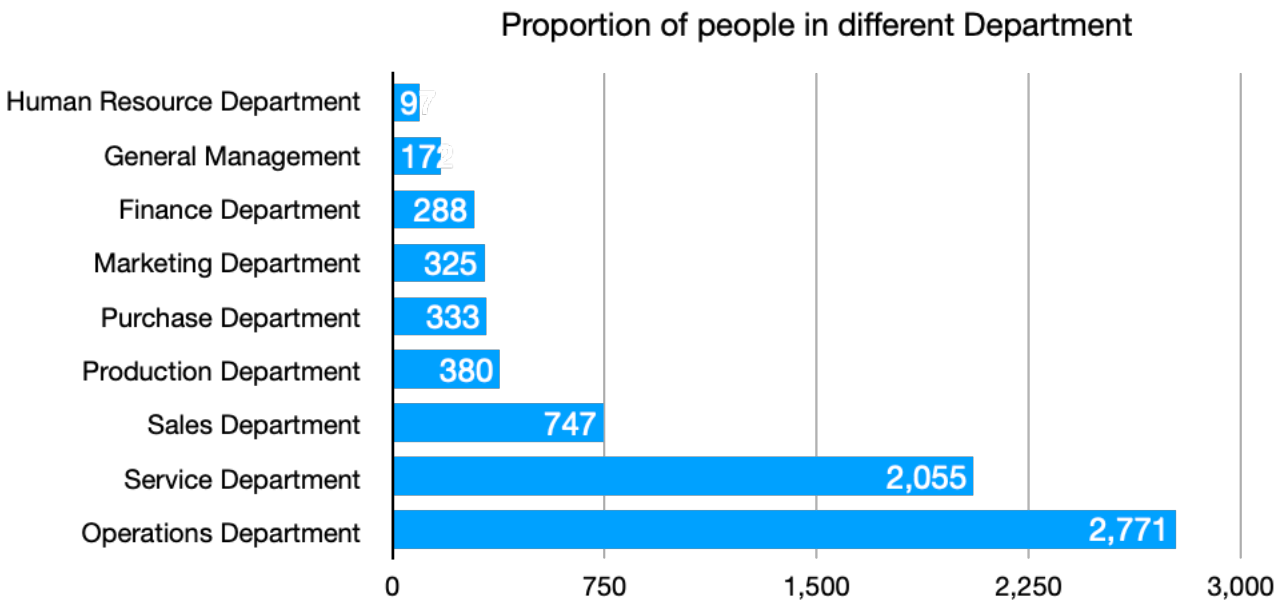
Minimum Salary in Company =100
Maximum Salary in Company =400000
Range of Salary in Company (Max-Min) =399900
Let no. of class intervals be 10
Class width (Range/no. of class intervals)=39990
Now the range divided into 10 intervals, each of width 39990

Query-

Minimum Salary in Company =MIN(C2:C7169, "Hired", G2:G7169)
Maximum Salary in Company =MAX(C2:C7169, "Hired", G2:G7169)
Range of Salary in Company =MAX(C2:C7169,"Hired",G2:G7169) - MIN(C2:C7169,"Hired", G2:G7169)
Class width =(MAX(C2:C7169, "Hired", G2:G7169) - MIN(C2:C7169, "Hired", G2:G7169))/10

Salary in range $100-$40,090 =COUNTIFS(C2:C7169,"Hired",G2:G7169,">=100", G2:G7169, "<=40090")
Salary in range $40,091 – $80,080 =COUNTIFS(C2:C7169,"Hired",G2:G7169,">=40091", G2:G7169, "<=80080")
Salary in range $80,081 – $120,070 =COUNTIFS(C2:C7169,"Hired",G2:G7169,">=80081", G2:G7169, "<=120070")
Salary in range $120,071 - $160,060 =COUNTIFS(C2:C7169,"Hired",G2:G7169,">=120071", G2:G7169, "<=160060")
Salary in $160,061 - $200,050 =COUNTIFS(C2:C7169,"Hired",G2:G7169,">=160061", G2:G7169, "<=200050")
Salary in range $200,051 - $240,040 =COUNTIFS(C2:C7169,"Hired",G2:G7169,">=200051", G2:G7169, "<=240040")
Salary in range $240,041 - $280,030 =COUNTIFS(C2:C7169,"Hired",G2:G7169,">=240041", G2:G7169, "<=280030")
Salary in range $280,031 - $320,020 =COUNTIFS(C2:C7169,"Hired",G2:G7169,">=280031", G2:G7169, "<=320020")
Salary in range $320,021 - $360,010 =COUNTIFS(C2:C7169,"Hired",G2:G7169,">=320021", G2:G7169, "<=360010")
Salary in range $360,011 - $400,000 =COUNTIFS(C2:C7169,"Hired",G2:G7169,">=360011", G2:G7169, "<=400000")

TASK 4: Proportion of people with different Department (Charts and Plots) -

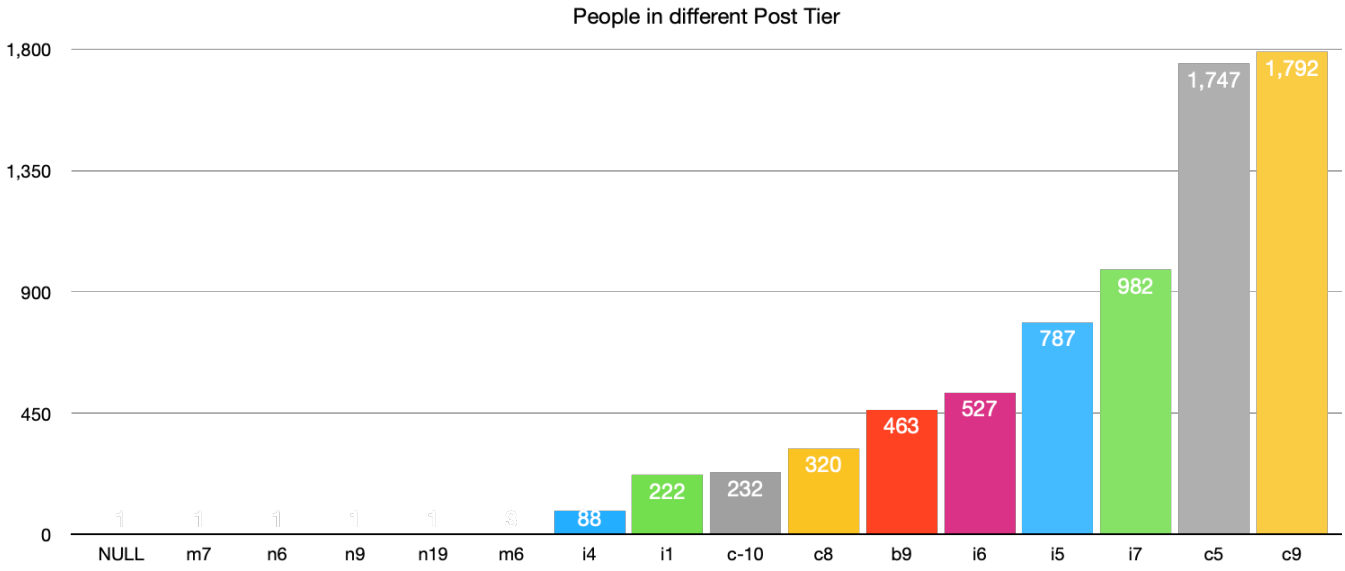


department	people
Human Resource Department	97
General Management	172
Finance Department	288
Marketing Department	325
Purchase Department	333
Production Department	380
Sales Department	747
Service Department	2055
Operations Department	2771

Query-

Number of people in Human Resource Department =COUNTIF(E2:E7169, "Human Resource Department")
Number of people in General Management Department =COUNTIF(E2:E7169, "General Management")
Number of people in Finance Department =COUNTIF(E2:E7169, "Finance Department")
Number of people in Marketing Department =COUNTIF(E2:E7169, "Marketing Department")
Number of people in Purchase Department =COUNTIF(E2:E7169, "Purchase Department")
Number of people in Production Department =COUNTIF(E2:E7169, "Production Department")
Number of people in Sales Department =COUNTIF(E2:E7169, "Sales Department")
Number of people in Service Department =COUNTIF(E2:E7169, "Service Department")
Number of people in Operations Department =COUNTIF(E2:E7169, "Operations Department")

TASK 5: Different Post Tiers (Chart) -



post_name	people
NULL	1
n10	1
m7	1
n9	1
n6	1
m6	3
i4	88
i1	222
c-10	232
c8	320
b9	463
i6	527
i5	787
i7	982
c5	1747
c9	1792

Query-

Number of people with Post tier NULL =COUNTIF(F2:F7169, "-")
Number of people with Post tier n10 =COUNTIF(F2:F7169, "n10")
Number of people with Post tier m7 =COUNTIF(F2:F7169, "m7")
Number of people with Post tier n9 =COUNTIF(F2:F7169, "n9")

Number of people with Post tier n6 =COUNTIF(F2:F7169, "n6")
Number of people with Post tier m6 =COUNTIF(F2:F7169, "m6")
Number of people with Post tier i4 =COUNTIF(F2:F7169, "i4")
Number of people with Post tier i1 =COUNTIF(F2:F7169, "i1")
Number of people with Post tier c-10 =COUNTIF(F2:F7169, "c-10")
Number of people with Post tier c8 =COUNTIF(F2:F7169, "c8")
Number of people with Post tier b9 =COUNTIF(F2:F7169, "b9")
Number of people with Post tier i6 =COUNTIF(F2:F7169, "i6")
Number of people with Post tier i5 =COUNTIF(F2:F7169, "i5")
Number of people with Post tier i7 =COUNTIF(F2:F7169, "i7")
Number of people with Post tier c5 =COUNTIF(F2:F7169, "c5")
Number of people with Post tier c9 =COUNTIF(F2:F7169, "c9")

Result-

One major achievement of using analytics in hiring processes is the ability to make data-driven decisions that lead to more efficient and effective recruitment outcomes. By analyzing recruitment data, businesses can identify which sources of applicants are most effective, which selection methods yield the best candidates, and which recruitment strategies have the best return on investment. This can result in reduced time-to-hire, lower cost-per-hire, and higher-quality candidates.

Another achievement is improved diversity and inclusion in the hiring process. Analytics can help identify any biases in the recruitment process and provide data-driven solutions to mitigate them. For example, analytics can help identify whether certain job descriptions or recruitment methods are turning off diverse candidates and provide insights on how to adjust them.

Overall, using analytics in the hiring process can lead to improved recruitment outcomes, a more diverse and inclusive workforce, and a more efficient and effective hiring process. This can ultimately lead to improved business outcomes, such as increased productivity, innovation, and profitability.