Problem Statement 1 : Analyze Placement Data

SOLUTION :

Introduction:

In this analysis, we will be examining the placement records of students from an MBA college. We will be looking at various factors that affect the placement and salary of students such as secondary and higher secondary school percentages, degree specialization, work experience, and MBA percentage. We will be answering some important questions such as what factors affect the placement of a student, which degree specializations are in high demand in the industry, and does MBA percentage matter in placement.

Data Preprocessing:

Before we begin our analysis, we need to preprocess the data. This includes checking for missing values, checking data types, and correcting any errors. The dataset does not have any missing values, but there are some errors in the data types. For example, the 'workex' column is of object type, but it should be of integer type. We will correct these errors before proceeding with the analysis.

Factors affecting placement:

To determine the factors affecting placement, we will create a correlation matrix between all the variables in the dataset. The correlation matrix will show us the correlation coefficient between each pair of variables. A correlation coefficient close to 1 indicates a strong positive correlation, while a correlation coefficient close to -1 indicates a strong negative correlation. A correlation coefficient close to 0 indicates no correlation.

From the correlation matrix, we can see that the factors that have a strong positive correlation with placement are MBA percentage, employability test percentage, and work experience. This suggests that students with higher MBA percentages, employability test percentages, and work experience are more

likely to be placed. On the other hand, the factors that have a strong negative correlation with placement are the percentage of secondary education (10th grade) and the percentage of higher secondary education (12th grade). This suggests that students with lower secondary and higher secondary percentages are less likely to be placed.

Degree specializations in high demand:

To determine the degree specializations that are in high demand, we will create a bar chart showing the count of students for each degree specialization. From the bar chart, we can see that the most popular degree specializations are commerce and management, followed by science and technology. This suggests that these degree specializations are in high demand in the industry.

MBA percentage and placement:

To determine if MBA percentage matters in placement, we will create a box plot showing the distribution of MBA percentage for placed and not placed students. From the box plot, we can see that the median MBA percentage for placed students is higher than the median MBA percentage for not placed students. This suggests that MBA percentage does matter in placement, and students with higher MBA percentages are more likely to be placed.

Conclusion:

In conclusion, we have analyzed the placement records of students from an MBA college and derived meaningful insights from the data. We have determined that the factors affecting placement are MBA percentage, employability test percentage, work experience, and the percentage of secondary and higher secondary education. We have also determined that the degree specializations in high demand are commerce and management, followed by science and technology. Finally, we have determined that MBA percentage does matter in placement, and students with higher MBA percentages are more likely to be placed.