Lavanya Ghanathey 16342393

**Assignment-1**

**Data Analysis of Student Performance Dataset Results**

1. The below Graph is plotted to get the count of males and females based on race/ethnicity. In the dataset race/ethnicity is divided into Group A, Group B, Group C, Group D and Group E. Red color represents the female count and the blue color represents the male count.

A graph of a number of people

Description automatically generated

***Conclusion:***

It is clear that the large number of females and males belong to Group C race/ethnicity. The second highest count of males and females belong to Group D race/ethnicity. The least female and male count belongs to Group A race/ethnicity.

1. The distribution of Reading, Writing and Math Scores are plotted using the Histograms. The X-axis represents the Range of Reading, Writing and Math Score and the Y-axis represent the Frequency.

A group of different colored bars

Description automatically generated

***Conclusion:***

We can conclude that the Reading Score, Math Score and the Writing Score of majority of students ranges from 60 to 80.

1. Different type of scores is compared between males and females. The X-axis represent the score types that are compared amongst females and males and the Y-axis represents the count.

A graph of different colored bars

Description automatically generated with medium confidence

***Conclusion:***

The figure shows that while males typically outperform females in math, females typically score higher in reading and writing.

1. The type of scores is compared against the test preparation course variable for males and females. The X-axis represents the Test Preparation course that is categorized into completed or none. The Y-axis represents the type of scores.

A group of blue and orange boxes

Description automatically generated

***Conclusion:***

Test preparation courses can help students perform better, yet the results may differ slightly depending on the score type and gender.

1. The below graph describes the correlation matrix(heat map) for Writing, Reading and the Math Scores.

A screenshot of a graph

Description automatically generated

***Conclusion:***

Reading Score and the Writing Score are positively correlated to each other whereas the reading and the writing scores are negatively correlated to math score.