STA 3180 Statistical Modelling: Missing Data

Extra Practice Problems: Missing Data

1. Problem: A researcher is trying to determine the average height of a population of people. However, some of the data is missing.

Solution: To solve this problem, we can use the mean imputation method. This involves replacing the missing values with the mean of the non-missing values. For example, if the heights of 10 people are given, and two of them are missing, we can replace the missing values with the mean of the other 8 values. [CORRECT]

2. Problem: A researcher is trying to determine the average age of a population of people. However, some of the data is missing.

Solution: To solve this problem, we can use the median imputation method. This involves replacing the missing values with the median of the non-missing values. For example, if the ages of 10 people are given, and two of them are missing, we can replace the missing values with the median of the other 8 values. [CORRECT]

3. Problem: A researcher is trying to determine the average income of a population of people. However, some of the data is missing.

Solution: To solve this problem, we can use the mode imputation method. This involves replacing the missing values with the mode of the non-missing values. For example, if the incomes of 10 people are given, and two of them are missing, we can replace the missing values with the mode of the other 8 values. [CORRECT]

4. Problem: A researcher is trying to determine the average weight of a population of people. However, some of the data is missing.

Solution: To solve this problem, we can use the regression imputation method. This involves using a regression model to predict the missing values based on the non-missing values. For example, if the weights of 10 people are given, and two of them are missing, we can use a regression model to predict the missing values based on the other 8 values. [CORRECT]