STA 3180 Statistical Modelling: Robust Statistics

Robust Statistics - STA 3180 Statistical Modelling

Robust statistics is a branch of statistics that focuses on robustness, or the ability to resist the effects of outliers. It is used to analyze data that may contain outliers or noise, and it is designed to be more resistant to the effects of outliers than traditional methods.

Key Concepts

* Robustness: The ability to resist the effects of outliers in data.
* Outliers: Data points that are significantly different from the rest of the data.
* Noise: Random variation in data that is not meaningful.

Definitions

* Robust statistics: A branch of statistics that focuses on robustness, or the ability to resist the effects of outliers.
* Outlier: A data point that is significantly different from the rest of the data.
* Noise: Random variation in data that is not meaningful.

Practice Multiple Choice Questions

Q1. What is robust statistics?

A. A branch of statistics that focuses on robustness, or the ability to resist the effects of outliers.

Q2. What is an outlier?

A. A data point that is significantly different from the rest of the data.

Q3. What is noise?

A. Random variation in data that is not meaningful.

Coding Examples

```
Start of Code
# Calculate the median of a vector
# Load the necessary packages
library(robustbase)
```

```
# Create a vector
x <- c(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20)
# Calculate the median
median(x)
End of Code
```