Chapter 2
Location, Variability and Process

Excerpted from Section 2.1c
Numerical Summaries Based on Deviations

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Understanding the concepts of the mean and standard deviation is necessary to understand data analysis.

This demonstration here is an excerpt from the larger slide set that explains both the mean and standard deviation.

Expression for the Sample Standard Deviation

Understanding and computing

▶ **Sample standard deviation**: Square root of the average squared deviation score based on degrees of freedom, sample size minus 1, $n - 1$

$$\frac{\sum (Y_i - m)^2}{n - 1}$$

data value
deviation from mean
squared deviation from mean
sum of squared deviations from mean
average of squared deviations from mean based on df
square root of average of squared deviations based on df

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