Bootstrap Method for the CI for the population parameter.

• Randomly Sample n observations with replacement from the data set. Find the statistic.
• Repeat this at least 10,000 times.
• Identify the middle 95%, by finding the 2.5th percentile and the 97.5th percentile.
• These values become the 95% bootstrap confidence interval.

Example: Suppose that you want to estimate the population standard deviation for a kitchen scale. You want to use the bootstrap method to do this. Below are the weights given from the scale from measuring the same apple. Compute a 95% bootstrap confidence interval for the population standard deviation.
4.0 4.5 5.6 4.8 5.2 4.7 4.8
5.8 4.5 4 4.8 4.7 5.1 5.2 5.3 4.9