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Analysis of Environmental Data

Week 7 Reading

1. Population mean does not affect the width of the confidence interval. The confidence interval is influenced by the population and sample size.
2. Standard deviation size and confidence interval width are positively correlated.
3. Population size itself doesn't affect the confidence interval width. Large populations with small sample sizes will have large confidence intervals.
4. Sample size directly affects confidence interval width. The larger the sample size, the more representative your sample is of the true population and the tighter the confidence interval.
5. A fish biologist wants to know the mean length of bluegills in the campus pond. They randomly sample 50 bluegill from the pond and calculate the mean and standard deviation of bluegill lengths. They then use the sample mean and standard deviation to construct a confidence interval for the entire population of the pond which says that if you were to repeat their sampling procedure many times, 95% of the time you would catch bluegill that fall in the constructed range of lengths.