**STT 810**

**In-Class Assignment 18**

For this problem we will be looking at the data in the hypodata.csv file.

1. Read the data into R.
2. Find the mean, standard deviation, and standard error.
3. Assuming the data is normal, build a 99% (2-sided) confidence interval with the t distribution.
4. Next, use standard bootstrapping to build the 99% confidence interval.
5. Use the Bayesian bootstrapping to build the 99% confidence interval.
6. Plot a histogram of the simulations in (4) and (5). Does it look like the simulated means fit a normal distribution?
7. How do the 3 confidence intervals compare?
8. Next, use both standard and Bayesian bootstrapping to build a 99% CI for the standard deviation. Plot a histogram of each. Is the graph symmetric or skewed?