Lecture 4: Gelman Hill Ch 2

Statistical Inference

Statistical inference is used to learn from incomplete or imperfect data.

This class sets up regression models using a measurement-error philosophy

$$y = \beta_0 + \beta_1 x + \epsilon,$$

where the errors are considered to be a random sample from a probability distribution, (e.g. $\epsilon \sim N(0, \sigma^2)$).

Confidence Intervals

Later on we will see how to use simulation for more confidence intervals in more complicated scenarios.