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Week 12 Reading Questions

1. If I were to take my dataset of bog turtle locations and wetland classifications for each location I could look at if the wetland classifications (emergent, shrub, forested) can be used to predict if a bog turtle will be found. If my model were to only consider those two variable, bog turtle presence/absence and wetland classification, I am missing out on so many other variables that explain where the turtles are located. There could be hydrology, temperature, seasonality, sex, and many other variables that impact the location of turtles within the wetland. However, if I were to include all of those possible variables my model would become very complicated to explain and understand. Striking a balance between using a model that explains some of the variation in the data and not including every single piece of possible variation is a challenge.
2. The water (A) and nitrogen (B).
3. -1.7 grams The intercept is given no water, nitrogen, or phosphorus
4. 3.95 grams. You take each value given, multiply it by the corresponding estimate given from the coefficient table, and add the intercept (base case).
5. A simple linear regression has 1 continuous predictor and 1 continuous response. A 1-way analysis of variance has 1 categorical predictor with 3 or more levels and 1 continuous response.
6. The deterministic components of the equation are α and β_{1xi}
7. The stochastic component is the error, ϵ