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ECO 602 Analysis of Environmental Data
11/21/2021
Partners: N/A

Week 12 Reading Questions

Q1: When using models adding more variables can make it more complex and harder to communicate to stakeholders or the public. Having more variables in you model makes it more complex but it also helps to remove static.

If I am looking to study the effects of climate change on an alpine butterfly species I could just look at the effects of increased temperature on adult butterflies. If I am only looking at these two simple categories I may see something that indicates an effect but there is now way of knowing what is actually happening. If we add in more categories like other life stages we might be able to see how the butterfly is effected by temperature change and which life stage is more effected. But the more elements we add the more complicated the model becomes and the harder it is to explain. If we can not communicate our science effectively the results become useless.

Q2: A. Water and B. Nitrogen

Q3: -1.7 and that's the base. I used the simple linear regression equation -1.7 = 0.043(0) + 0.192(0) + -0.027(0)

Q4: 5.65 and I used the simple linear regression equation -1.7 = 0.043(10) + 0.192(30) + -0.027(20)

Q5: The difference between a simple linear regression and a 1-way analysis of variance is linear regression is used when the data is continuous and 1-way ANOVA is when data is categorical.

Q6: The deterministic component of the equation $yi=\alpha+\beta 1xi+\epsilon$ is the yi. That is because it is the base component.

Q7: The stochastic component of the equation is the independent and dependent variables.