Homework 2

Margaret Swift

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Exercise 1: Why are the storage models of xdata and ydata different?

Answer: `xdata` is stored as a `list` because the data within are a mixture of numeric and string characters. `ydata` is `numeric` because it is only filled with numeric data.

Exercise 2: What does this map tell us about the spatial distribution of bird counts and the moisture deficits where they are common?

Answer:

Exercise 3: Can we tell from this plot if birds are declining?

Answer:

Exercise 4: How would I determine if adding new sites has biased the sample toward warmer or cooler temperatures?

Answer:

Exercise 5: Does the distribution of data suggest that trends in time for bird abundances could be hard to estimate?

Answer:

Exercise 6: From the object trend, is temperature increasing or decreasing on average? Is this trend 'significant'? Does it differ by site?

Answer:

Exercise 7: What is the difference between the two fits?

Answer:

Exercise 8: How does the distribution change at 1987?

Answer:

Exercise 9: Which variables in this GLM appear to be important and why?

Answer:

Exercise 10: Identify differences between the glm and Bayesian results. Which would you use?

Answer:

Exercise 11: Examine the main effects and interactions from this analysis to suggest which cover types have experienced the biggest declines.

Answer:

Exercise 12: If the trends over time are explained by other variables, then I should be able to remove year from the model and still explain the trend. Use glm and jags to see how well variables could explain trends.

Answer:

Exercise 13: According to Wickam, what are the five most common problems with data sets?

Answer: