

Homework 8

Trevor Caughlin

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Question 1:

For your own dataset (or data from Dryad; whichever you have used for previous “bring your own data” questions):

- (A) Fit models with multiple covariates using `map2stan`. Include your code in your response.
- (B) Select the best fit model between at least two models with different covariates using WAIC (for details, see Chapter 6 of McElreath).

Question 2:

Fit a model for one of the following data competitions:

1. <https://www.drivendata.org/competitions/51/electricity-prediction-machine-learning/>
2. <https://www.drivendata.org/competitions/2/warm-up-predict-blood-donations/>
3. <https://www.drivendata.org/competitions/1/united-nations-millennium-development-goals/page/2/>

Compare the predictive accuracy of your fitted model with the accuracy of your online competitors. Note: the problem with a cash prize (#1) is harder than problems #1 and #2, which do not have an associated prize. Feel free to use whatever statistical technique you see appropriate.

(note: if you do win the €23,000 cash prize, it would be nice if you bought lunch for the class)

Question 3:

Complete problems 6H1-6H3 on page 207 of Richard McElreath’s text. Please note that a detailed description of all the knowledge required to fit these problems is in Chapter 6 of McElreath.