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Upcoming homeworks and TA office hours: STATGR6102_001_2021_1 - APPLIED STATISTICS II

1 message

STATGR6102_001_2021_1 - APPLIED STATISTICS II <notifications@instructure.com> Thu, Jan 14, 2021 at 6:57 PM
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Hi everyone,

I'll hold an office hour tomorrow (Friday) at 10 - 11 am. Here's the permanent zoom link: https://columbiauniversity.zoom.us/j/97213724013. No recitation this week. We'll send out a course plan, with details about exams, final projects, and peer grading shortly (I'll grade this week's and the next two homeworks).

Class 2a (01/20):

reading due: workflow section 6.3, BDA chapter 2

homework: BDA 2.11

Class 2b (01/25)

reading due: BDA chapter 3

homework:

a. Write a Stan program to fit the model, y_n = a + b*x_n + error_n, for n=1,...,N, with errors that are independent and normally distributed with mean 0 and standard deviation sigma. Assume the parameters a, b are restricted to be positive.

b. In R, simulate fake data for this model with N=100, x uniformly distributed between 0 and 10, and a, b, sigma taking on the values 2, 3, 0.2.

c. Fit the Stan model using your simulated data and check that the true parameter values are approximately recovered. Check also that you get approximately the same answer as from fitting a classical linear regression.

d. Make a single graph showing a scatterplot of the simulated data and the fitted model.

e. Report on any difficulties you had at any of the above steps.

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