Introductory Survey

Johannes Karreth

Applied Introduction to Bayesian Data Analysis

Purpose and instructions

This survey will help me get a better idea of our group's knowledge and skills going into this workshop. You are not expected to know the answers to any of the following questions. It's perfectly fine to answer "Don't know" or leave the answer blank. The survey may use terms you are not familiar with yet — that's no problem at all. Don't take more than 10 minutes to complete this survey. Thank you for your time!

Please answer each of the following questions to the best of your knowledge on the space below. (This survey is not graded.) Email your answers as a PDF file to jkarreth@albany.edu by January 1. Thank you!

Questions

1. If you roll a fair dice once, what is the probability for getting at least 3 points?

2. What do PDF, PMF, and CDF stand for?

3. Why is it useful that the sampling distributions of MLE parameters are asymptotically normal?

4. How do you convert a logit coefficient into something more interpretable?

5. What is the role of link functions in GLMs?

6. What is the Hessian matrix?

7. What is $(\mathbf{X'X})^{-1}\mathbf{X'y}$ more commonly referred to as?

8. Solve the following integral:

$$\int_{-\infty}^{\infty} \frac{1}{\sqrt{2\pi\sigma^2}} \, exp\left[-\frac{1}{2\sigma^2}\sum(x-\mu)^2\right] \mathrm{d}x$$

9. How would you rate your familiarity with R?

    a   Not familiar
    b   Beginner
    c   Advanced

10. What got you interested in signing up for this course?