STATS 500 - Homework 7

Due Wednesday, November 18, 2015

1. **Based on Chapter 10, question 1 (page 159)**

   Use the `prostate` data with `lpsa` as the response and the other variables as predictors. Implement the following variable selection methods to determine the "best" model:

   (a) Backward Elimination

   (b) AIC

   (c) Adjusted R^2

   (d) Mallows' C_p

   Comment on the models selected (similarities and/or differences). Compare the fits of the full model and those selected by the methods above.

2. In the above problem, which of the 4 criteria would you use to select your final model? Provide the reasoning behind your answer.

Solutions to this homework should not exceed 5 pages.