

If R is used, present the required output and the (relevant) syntax.

1. From ALR Problem 10.2
2. From ALR Problem 10.4
3. The data `BaseballPitchers.txt` that you can download from our Canvas page¹ contains salary and performance data for major-league baseball pitchers at the start of the 1987 season.
 - a) Employing one or more of the methods of model selection described in the course, develop a regression model to predict pitchers' salaries. Be sure to explore the data and think about variables to use as predictors before specifying candidate models. How successful is the model in predicting salaries? Does the model make substantive sense?
 - b) Repeat part (a), but this time divide the data randomly into two subsamples, applying one or more methods of model selection to the first (training) subsample. Then evaluate the selected models on the second (validation) subsample. What do you find? If you employed more than one method of model selection, how do they compare?

¹The data and questions were constructed based on the supplementary material of "Applied Regression Analysis and Generalized Linear Models" 3rd Ed by Fox.