
STAT 51200 – FALL 2022
Applied Regression Analysis

Homework #03

1. Read Chapter 2 in the text.
2. Do Problems 2.2, 2.4, 2.10, 2.13, 2.17, 2.18, 2.21, 2.23, 2.30, 2.31, 2.39 (see also problem 4 below).
3. Redo **Example 02** (Diamonds) but now in **R**.
4. Consider the SLR model given by $y_i = \beta_0 + \beta_1 x_i + \epsilon_i$, $i = 1, \dots, n$ with the 'usual' assumptions. However in addition, suppose that you now know that $\beta_0 \equiv 0$. Obtain the LS estimators of all the unknown parameters in this case.
5. Refer to problem 1.43 from HW 02 and the CDI data set in Appendix C.2. Using the R^2 statistic as the criterion, which predictor variable accounts for the largest reduction in the variability in the number of active physicians?