

STAT 345-01: Nonparametric Statistics

Problem Set 8

Assigned 2018 October 30
Due 2018 November 6 (election day)

Show your work on all problems! Be sure to give credit to any collaborators, or outside sources used in solving the problems. Note that if using an outside source to do a calculation, you should use it as a reference for the method, and actually carry out the calculation yourself; it's not sufficient to quote the results of a calculation contained in an outside source.

Please hand in parts one and two separately.

1 Part One

1.1 Conover Problems on Lillefors Tests

Exercise 6.2.2:

Followup: Evaluate the (one-sample) Cramér-von Mises and Anderson-Darling statistics on the data for Exercise 6.2.2.

Exercise 6.2.6:

1.2 Conover Problems on Two-Sample K-S Tests

Exercise 6.3.2:

Exercise 6.3.3:

Followup: Use the two-sample Anderson-Darling test on the data from exercise 6.3.2. Note that the critical values for the test are tabulated in Pettitt, *Biometrika*, **63**, 161 (1975). <https://www.jstor.org/stable/2335097>

2 Part Two

For three of the six problems on this problem set, perform a Monte Carlo simulation to estimate the p -value for the test in question. (5 points per problem; extra credit available for doing more than three.)