

COSC6323 - Exercise 4

February 2021

Instructions

REPORT CONTENT:

1. Problem solution
2. Commented output of the hypothesis test
3. Your summary for the described problems

SUBMIT:

1. FirstName_LastName.rmd
2. FirstName_LastName.pdf

1 Task 1

As part of his senior research project in the Fall semester of 2001, Scott Keats looked for a possible relationship between marijuana smoking and a deficit in performance on a task measuring short term memory – the digit span task from the Wechsler Adult Intelligence Scale. Two groups of ten subjects were tested. One group, the "nonsmokers," claimed not to smoke marijuana. A second group, the "smokers," claimed to smoke marijuana regularly. Is there a significant difference between the smokers and non-smokers? Content of the data file:

NonSmokers,Smokers

18,16

22,20

21,14

17,21

20,20

17,18

23,13

20,15

22,17

21,21

Provide following:

1. Summary statistics
2. Visualisations (box plot)
3. Shapiro-Wilk Normality test for the difference
4. T-test results with the comments
5. Paired t-test results with the comments