Hands On Lesson 7

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The problem to be solved is how does the temperature in New Haven change over time?

The hypotheses are:

H0: There is no difference between the mean of the temperatures.

Ha: There is a difference between the mean of the temperatures

The results of the hypothesis test and the conclusion

What is the *p*-value for this test? Based on this *p*-value, do you reject the null hypothesis? The p-value is 0.0006383 so we can reject the null hypothesis. There is a statistical difference between average temperatures of the first 25 years and the last 25 years.

Code Used:

1 nhtemp

3 first25 <- nhtemp[1:25]

4. last25 <- nhtemp[36:60]

6. t.test (first25, last25, paired = TRUE)

Results in R Studio:

Paired t-test

data: first25 and last25

t = -3.924, df = 24, p-value = 0.0006383

alternative hypothesis: true difference in means is not equal to 0

95 percent confidence interval:

-2.2645321 -0.7034679

sample estimates:

mean of the differences

-1.484

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