A Short Answer

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Abstract

Results and their interpretation about the correlation coefficients and p-value of the temperatures.

1 Methods

To calculate the correlation coefficient between successive years, the data were input and two subsets were generated, $x_1 and y_1, they contained the first temperature to the 99 thte$

As for calculating the correlation coefficient for each randomly permuted year sequence, temperatures were generated randomly.

P-value was calculated.

2 Results

Coefficient between successive years, $cor_1 is 0.3261697. Correlation coefficient for each randomly per$
$value cor_2/cor_1 is 0.01230607.$

3 Interpretation

The p-value is less than 0.05, so it is statistically significant association.

4 Discussion

Actually, I still don't figure out why that is p-value, huh.

```
MyData <- load("../data/KeyWestAnnualMeanTemperature.RData")
MyData_1 <- ats[,]
Year <- MyData_1[[1]]
Tempera <- MyData_1[[2]]
x_1 <- Tempera[1:99]
y_1 <- Tempera[2:100]
cor_1 <- cor(x_1, y_1)

MyData_2 <- sample(Tempera, size = 10000, replace = T)
x_2 <- MyData_2[1:9999]
y_2 <- MyData_2[2:10000]

cor_2 <- cor(x_2, y_2)

print(cor_1)
print(cor_2)
print(cor_2/cor_1)
```