

Autocorrelation in weather

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1 Research Question

The R script TAutoCorr.R aims to answer the question: *Are temperatures of one year significantly correlated with the next year, across years in a given location?*

2 Results

The approximate p-value was calculated as the fraction of the correlation coefficients obtained from the permutations (a) that were greater than the correlation coefficient from the unpermuted dataset (b).

$$pvalue = \frac{\text{instances of } a > b}{\text{total number of } a(s)} = 0.0$$

3 Interpretation

At a given location, the temperatures of successive years are significantly correlated.