

Is Florida Getting Warmer?

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1 Introduction

This investigation aimed to determine whether there was a gradual increase in temperatures in Key West, Florida, throughout the 20th century.

2 Methods

To analyze the data, temperatures were randomly reassigned to years 10,000 times. A permutation analysis was performed to compare the distribution of random correlation coefficients with the observed correlation coefficient. The proportion of random correlation coefficients exceeding the observed value was used to estimate an approximate asymptotic p -value.

3 Results & Interpretation

The histogram in Figure 1 illustrates the distribution of random correlation coefficients.

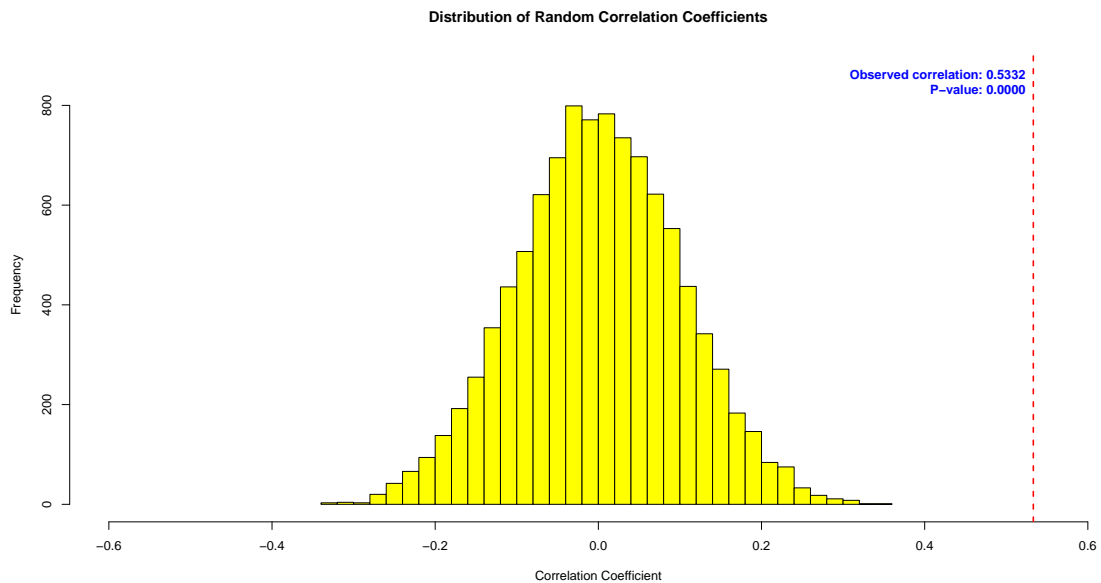


Figure 1: Histogram of random correlation coefficients compared to the observed correlation coefficient. The red dotted line represents the observed correlation coefficient.

The observed correlation coefficient was approximately 0.533. The p -value was 0, indicating that there were no random correlation coefficients that exceeded the observed correlation coefficient.

Based on these analyses, we concluded that Key West, Florida, has experienced significant warming over the 20th century.