

Lab 2: Introduction to Time Series in Pandas

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1 Vacation search results

Query "vacation" at [Google's trends website](#) for Poland, United, States, and United Kingdom. Download search results from 2004 to the present day. Import csv files. Perform the following tasks:

- Set datetime index for each dataframe.
- Rename columns using country codes (eg. PL) as headers.
- Combine the search counts in one dataframe.
- Present the time series for all countries in one plot.
- Generate descriptive statistics.
- Show three histograms in one plot.
- Show three kernel densities in one plot.

2 Average temperature dataset

Get the average temperature data for St. Louis, Missouri from [NOOA website](#). Please note that the missing values are coded with -99. Perform the following tasks:

- Import dataset.
- Locate missing values and change them to nan.
- Use the interpolate function to put a value in the Nan's place.
- Convert the index to datetime format.
- Plot the average temperature time series, the corresponding histogram, and kernel density plot.
- Generate descriptive statistics.

Where eagles dare. Create a four-column table shown below the temperature plot at the NOAA website