

Using **pandas**, **numpy** and **matplotlib.pyplot**

- 1) Load the data from the "inflation" tab into a dataframe called "df_infl"
- 2) Rename the columns such that: "infl_gen", "ener", "alim_fres", "alim_proc", "serv", "goods" reordering the columns if necessary (0.25 points)
- 3) Create the dataframe "df_infl_yoy" that contains the interannual growth of each series in "df_infl" (1 point)
- 4) Create a "df_stats" dataframe that contains the **mean, variance, standard deviation and median** of the year-on-year growth of each series for the period 2015-2016. The result must be a table of dimensions (4X6) where the names of the rows are those of each statistic and each column that of the corresponding series
- 5) Obtain the correlation matrix of the six series in variations
- 6) Create a series "sr_infl_gen" that contains the monthly growth of the series "infl_gen"
- 7) Standardize the "sr_infl_gen" series (subtract the mean and divide by standard deviation) and plot a histogram of the standardized series (**Hint: plt.hist**)
- 8) **Using Boolean indexing**, choose one of the six series of "df_infl_yoy" and substitute values less than zero for zero.
- 9) Using the data in the "pesos" tab, calculate the contribution to year-on-year growth ("df_infl_yoy") of each of the five components to headline inflation. * Attention: the weights are annual and the CPI data are monthly. You can monthlyize the data with pandas' resample function (resample ('M'). Bfill ()). The result of the monthlyization must be a dataframe with the same months as df_infl_yoy
- 10) Make a stacked bar chart with the contributions calculated in section
- 11) How much did fresh food prices grow in the last month in year-on-year terms? Is this growth above or below its historical average? How much did fresh food prices grow in the last month in year-on-year terms? Is this growth above or below its historical average?