Bionaut task. Results description

Original datasets are .nc4 files, so we need to install NETCDF4 module to work with them. I created Conda environment with needed packages, you can import it.

I wrote “globdata” module to work with datasets. It contains 2 main classes – DataSet and DataLoader. Data extraction is done with DataLoader, we can cache datasets in memory not to lose time for uploading big files and convertation to pandas.DataFrame. Two main methods of DataLoader – “time\_series” and “time\_slice\_daily”. The first one returns time series for different parameters (list) for an exact coordinate. The second method returns global values of one variable at exact time.

The example of data processing is in the notebook, you should see results without running it (if you don’t – tell me, I will fix). I calculated some cross correlations for different parameters of atmosphere in two different points (Middle East and Texas). Another value I got – timeseries of avg. global temperature.