WINTER INTERNSHIP 2021
TEST TASKS

Please send your solutions in Python as a .zip archive no later than **23:59** of **January 17, 2021**, at darynapesina@it-jim.com. Good luck!

Task 1.

Write a simple 2D correlation function on your own. You may use numpy, but basic math only. Do calculations in float.

Input: two grayscale images.

Output: *.png file with a correlation image.

Task 2.

Here you can find a set of images with blobs (binary large objects) represented by black spots.

Please make a function that detects (finds *xmin, xmax, ymin, ymax* of) black spots on these images. This function should also visualize results by surrounding each spot (blob) with a red rectangle.

The input of the function is the path to the folder with images.

The first output is a list of dicts like this:

[{'file': SR1.png, 'coords': [left,right,top,bottom]}, ...]

Second output: *.png files with a visualization of results.

Input image examples: