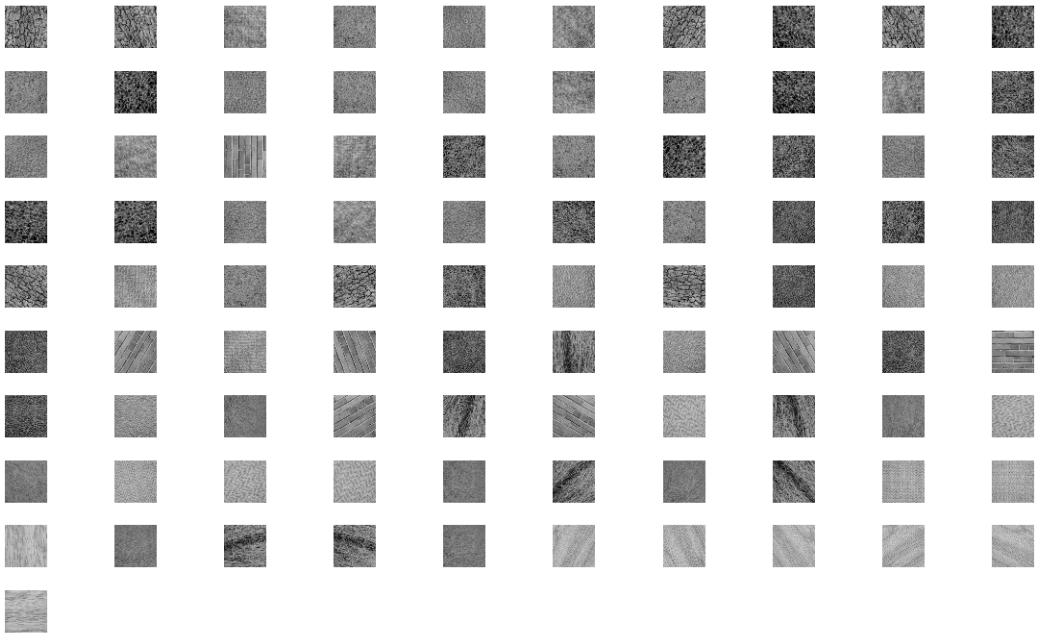
COC202 Computer Vision
Lab 10 – Texture

In this lab, you will implement some LBP texture descriptors and use them for image retrieval.

If you have not yet finished the exercises from the previous lab, do them first.

1. Write a function that is passed a (greyscale) image and returns an LBP histogram based on the basic LBP descriptor (and the direct 8-neighbourhood).

2. Download the texture database from Learn and perform CBIR based on LBP histograms on it.

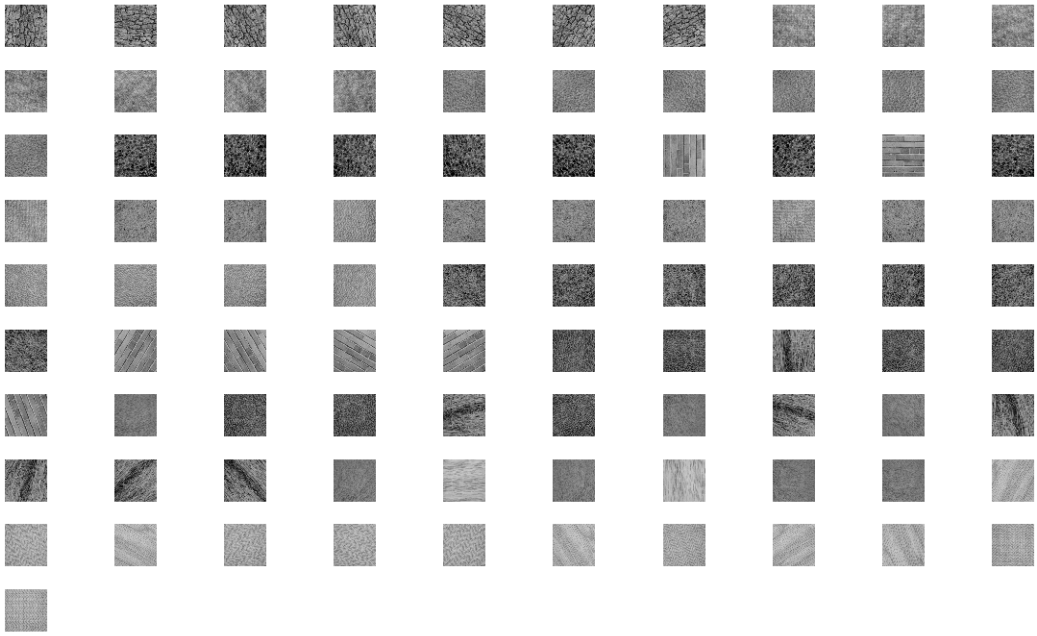


3. Write a function that is passed a (greyscale) image and returns an LBP histogram based on rotation invariant LBP (on the direct 8-neighbourhood).

   Hint: The best way to approach this is probably to write a function that calculates the mapping between LBP and rotation invariant LBP codes and store it in a look-up table, and then use this table together with the function from Exercise 1.

   Matlab functions that should be useful here: fi, bitror.

4. Again perform CBIR on the texture database but this time using rotation invariant LBP, which should lead to improved results.



Once you have finished all exercises you may leave the lab.