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Programming Assignment 3 – Part 1

Implementation details:

1. The HOG is implemented in 2 parts.
2. The first one titled 'hogVisual.m' implements HOG to images for which a visualization of the descriptor is required. This script internally calls the function 'findHistBlockVisu()' which essentially computes the HOG for a 16x16 block and also returns its visualization.
3. The second part implements HOG in such a way that it read a renamed version of the INRIA dataset's positive and negative examples, stores the descriptor of each of the images in an array and saves a .mat file.
   Note: The second part may not execute without the modified INRIA dataset present in the current matlab folder. The modified dataset is not included in the submission due to size constraints.

Results:

Figure 1: Visualization of the HOG on a bigger image than that in the INRIA dataset.

Figure 2: Visualization of the HOG on a bigger image than that in the INRIA dataset.

Figure 3: Visualization of the HOG on a bigger image than that in the INRIA dataset.

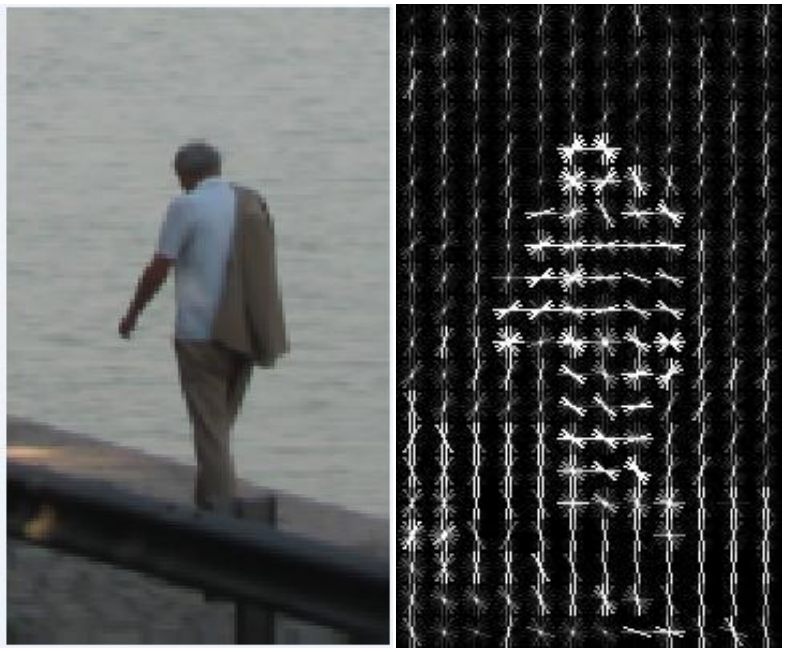

Figure 4: Positive example from dataset

Figure 5: Positive Example from dataset

Figure 6: Positive Example from dataset

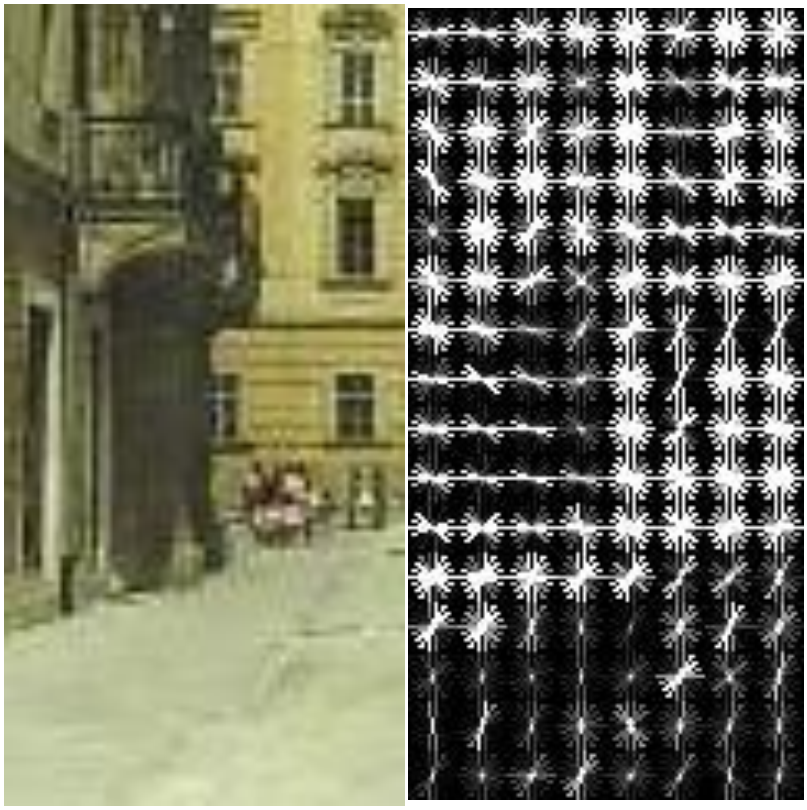

Figure 7: Negative example - Clipped from dataset

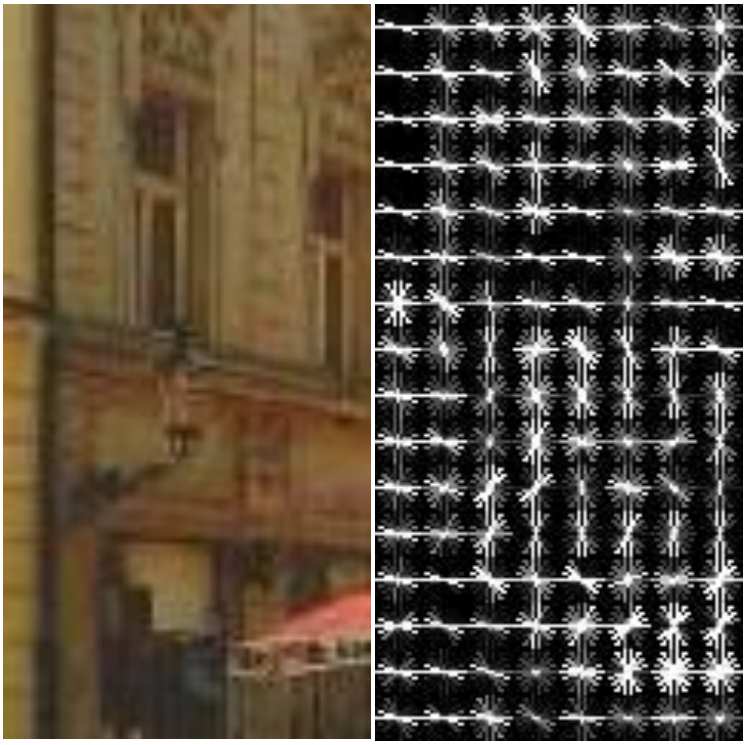

Figure 8: Negative example - Clipped from dataset

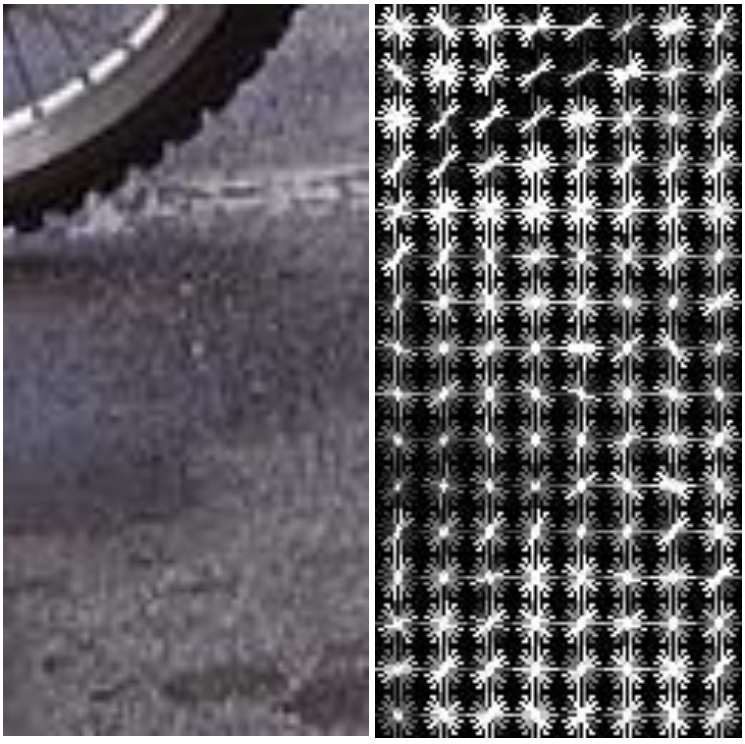

Figure 9: Negative example - Clipped from dataset

Figure 10: Negative example - Clipped from dataset