**Lab Assignment 10**

1. **DCT and IDCT**

For any input image, find two-dimensional DCT and then IDCT to recover the original image. Compare the final output with the original image. You can refer the source given below or apply any other code. Inbuilt functions such as dct2 can be used.

<https://inst.eecs.berkeley.edu/~ee123/sp16/Sections/JPEG_DCT_Demo.html>

1. **DFT and IDFT**

Same problem as above but apply DFT in place of DCT. Compare final output with the original image.

1. **Motion Detection using Optical flow**. These functions can be used to implement the same:

**cv2.calcOpticalFlowPyrLK() or**

cv.calcOpticalFlowFarneback or any other

The sources can be used are:

<https://opencv-python-tutroals.readthedocs.io/en/latest/py_tutorials/py_video/py_lucas_kanade/py_lucas_kanade.html>

<https://www.geeksforgeeks.org/python-opencv-dense-optical-flow/>