IDC 410: Machine Learning

Spring Semester 2025-26

Assignment 04

Instructor: Prof. Shashikant R. Dugad

Uploaded on 11th February 2026 (Wednesday)

Submission: On or Before 17th February 2026

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1. On the following image, apply a) Robert, b) Prewitt, c) Sobel d) Laplacian e) Laplacian with Gaussian (5x5, sigma=2) and f) Canny edge detector

   Save the image with edges after each type of edge detection technique along with original image (All 7 images on the two page) in a **pdf** file. Also provide your own assessment of each of the filter details that you used in your solution.

   Note:
   1. You should write a program in modular form by writing your own functions for various tasks

   2. As far as possible, the program should **NOT** make any functional calls from OpenCV OR any other libraries.