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| **Sr. No** | **Date** | **Practical Title** |
| 1 | **19-03-2022** | **Basics**  a) Program to calculate number of samples required for an image.  b) Program to study the effects of reducing the spatial resolution of a digital image.  c) Program to study the effects of varying the number of intensity levels in a digital image  d) Program to perform image averaging (image addition) for noise reduction.  e) Program to compare images using subtraction for enhancing the difference between images. |
| 2 | **26.03.2022** | **Image Enhancement**  A Basic Intensity Transformation functions  i. Program to perform Image negation.  ii. Program to perform threshold on an image.  iii. Program to perform Log transformation.  iv. Power-law transformations.  v. Piecewise linear transformations.  a. Contrast Stretching.  b. Gray-level slicing with and without background.  c. Bit-plane slicing.  B  1. Program to plot the histogram of an image and categorise  2. Program to apply histogram equalization.  C Write a program to perform convolution and correlation.  D Write a program to apply smoothing and sharpening filters on grayscale and color images.  a) Low Pass  b) High Pass  Note: Use all kernels mentioned in the referenced book. |
| 3 | **1.04.2022** | **Filtering in Frequency Domain**  a) Program to apply Discrete Fourier Transform on an image.  b) Program to apply Low pass and High pass filters in frequencydomain.  c) Program to apply Laplacian filter and high boost in frequencydomain.  d) Program for homomorphic filtering. |
| 4 | **9.04.2022** | **Image Denoising**  a) Program to denoise using spatial mean and median filtering.  b) Program for Image deblurring using Weiner filters. |
| 5 | **16.04.2022** | **Color Image Processing**  a) Program to read a color image and segment into RGB planes , histogram of color image .  b) Program for converting from one color model to another model.  c) Program to apply false colouring(pseudo) on a gray scale image. |
| 6 | **30.04.2022** | **Fourier Related Transforms**  Program to compute Discrete Cosine Transforms. |
| 7 | **23-04-2022** | **Morphological Image Processing**  a) Program to apply erosion, dilation, opening, closing.  b) Program for detecting boundary of an image.  c) Program to apply Hit-or-Miss transform.  d) Program to apply morphological gradient on an image.  e) Program to apply Top-Hat/Bottom-hat Transformations. |
| 8 | **30-04-2022** | **Image Segmentation**  Program for Edge detection using Sobel, Prewitt and Canny. |