

ICE-3208: Digital Image and Speech Processing Sessional

| SL | Experiment Name | Marks |
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| 1. | Write a program to execute the following image pre-processing. <ul style="list-style-type: none">• Read images from a folder.• Resize images and save to a folder.• Apply color transform on images and save to a folder.• Normalize images and save into a folder.• Filter images and save into a folder. | |
| 2. | Write a program to execute Semantic Segmentation. | |
| 3. | Write a program to execute the following problem. <ul style="list-style-type: none">• Given an image and a mask, determine the region of the image using the mask, compute the area of the region, then label the region by overlapping the mask over the image. | |
| 4. | Write a program to execute the following image enhancement. <ul style="list-style-type: none">• Basic Intensity Transformation (Negation, Log transformation, Power law transformation and Piece-wise linear transformation).• Convolution (High pass, Low pass and Laplacian filter). | |
| 5. | Write a program to execute the following edge detections <ul style="list-style-type: none">• Canny edge detection• Prewitt edge detection• Sobel edge detection | |
| 6. | Write a program to execute the following speech preprocessing <ul style="list-style-type: none">• Identify sampling frequency• Identify bit resolution• Make down sampling frequency then save the speech signal. | |
| 7. | Write a program to display the following region of a speech signal. <ul style="list-style-type: none">• Voiced region.• Unvoiced region.• Silence region. | |
| 8. | Write a program to compute zero crossing rate (ZCR) using different window function of a speech signal. | |
| 9. | Write a program to compute short term auto-correlation of a speech signal. | |
| 10. | Write a program to estimate pitch of a speech signal. | |