Rajarata University of Sri Lanka

Department of Computing

ICT2403 - GRAPHICS & IMAGE PROCESSING
Class Activity -04

Mark whether the following statements are TRUE or FALSE.

1. Spatial domain image processing techniques operate directly on the pixels of an image. (……)
2. Selecting an image enhancement technique for image processing application is not a problem oriented task. (……)
3. Intensity transformation can express as *s= T(r)* Where transformation *T* maps a pixel value *r* into a pixel value *s*. (……)
4. Inverting an image is an example for linear transformation. (……)
5. The general form of log transformation is expressed using the equation *s =log (c)(1+r)* where *c* is a constant and it maps pixel value *r* in input image to the pixel value *s*. (……)
6. We use log transformation to expand the values of dark pixels in an image while compressing the higher level values. (……)
7. Gamma correction is important when displaying an image accurately on a computer screen. (……)
8. Low contrast images can results from poor illumination, lack of dynamic range in the imaging sensor, or even wrong setting of a lens aperture during image acquisition. (……)
9. Gray level slicing and thresholding are examples for log transformation and use to enhance the image. (……)
10. Intensity histogram is a graphical representation of the intensity distribution of an image. (……)
11. Histogram of low contrast image has broaden dynamic range for its' intensity histogram. (……)
12. Histogram equalization is a method that improves the contrast in an image. (……)
13. Stretch out the intensity range between the minimum and maximum of intensity range of the existing image is known as histogram equalization. (……)
14. Noise is a visual distortion in digital images and causes visual degradations in digital images. (……)
15. High ratios of signal to noise ratio will indicate very high visible noise. (……)
16. ISO factor, lens exposure time, shadows are example for sources of noise. (……)
17. Gaussian noise is noise that has a random and normal distribution of instantaneous amplitudes over time. (……)
18. Salt impulse noise causes dark spots on the digital image and the pepper impulse noise causes brighter spots on the digital image. (……)
19. Periodic noise arises typically from the electrical or electromechanical interference during the image acquisition. (……)
20. Unlike image enhancement, most part in image restoration is a subjective process. (……)

21. Restoration attempts to recover an image that has been degraded by using the prior knowledge of the degradation phenomenon. (……)
22. Contrast stretching is an image enhancement technique and it is focused to view purpose whereas; removing image blur using de-blurring technique is considered as image restoration. (……)

Rajarata University of Sri Lanka

Department of Physical Sciences

GRAPHICS & IMAGE PROCESSING – ICT2403

Class Activity -04

Mark whether the following statements are TRUE or FALSE.

23. Spatial domain image processing techniques operate directly on the pixels of an image. (……)
24. Selecting an image enhancement technique for image processing application is not a problem oriented task. (……) → problem oriented
25. Intensity transformation can express as *s= T(r)* Where transformation *T* maps a pixel value *r* into a pixel value *s*. (……)
26. Inverting an image is an example for linear transformation. (……)
27. The general form of log transformation is expressed using the equation *s =log (c)(1+r)* where *c* is a constant and it maps pixel value *r* in input image to the pixel value *s*. (……) → s=c log (1+r)
28. We use log transformation to expand the values of dark pixels in an image while compressing the higher level values. (……)
29. Gamma correction is important when displaying an image accurately on a computer screen. (……)
30. Low contrast images can results from poor illumination, lack of dynamic range in the imaging sensor, or even wrong setting of a lens aperture during image acquisition. (……)
31. Gray level slicing and thresholding are examples for log transformation and use to enhance the image. (……) → linear transformation
32. Intensity histogram is a graphical representation of the intensity distribution of an image. (……)
33. Histogram of low contrast image has broaden dynamic range for it's' intensity histogram. (……) → narrowed
34. Histogram equalization is a method that improves the contrast in an image. (……)
35. Stretch out the intensity range between the minimum and maximum of intensity range of the existing image is known as histogram equalization. (……) → not in min and max
36. Noise is a visual distortion in digital images and causes visual degradations in digital images. (……)
37. High ratios of signal to noise ratio will indicate very high visible noise. (……) → low noise
38. ISO factor, lens exposure time, shadows are example for sources of noise. (……)
39. Gaussian noise is noise that has a random and normal distribution of instantaneous amplitudes over time. (……)
40. Salt impulse noise causes dark spots on the digital image and the pepper impulse noise causes brighter spots on the digital image. (……) → other way round
41. Periodic noise arises typically from the electrical or electromechanical interference during the image acquisition. (……)
42. Unlike image enhancement, most part in image restoration is an subjective process. (……) → objective

43. Restoration attempts to recover an image that has been degraded by using the prior knowledge of the degradation phenomenon. (……)
44. Contrast stretching is an image enhancement technique and it is focused to view purpose whereas; removing image blur using de-blurring technique is considered as image restoration. (……)