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Assignment on Image Processing

Assignment 1 Deadline: September 28, 2015

a) What is an image? Explain different steps involved in image processing?
b) What are the application of Image processing? Discuss in brief.
c) What do you mean by spatial resolution and intensity level resolution? What is the importance of these two terms in quality of image?
d) Explain the effect of reducing spatial resolution and intensity level resolution?
e) What do you mean by sampling and quantization? What happens if samples are increased and vice-versa?
f) What if quantization levels are increased? Relate it with quality of image.

Assignment 2 Deadline: September 30, 2015

g) What do you mean by connectivity? Explain different type of connectivity with necessary examples and figures?
h) What is levelling a pixel? How can an image can be labelled according to different connected basis? Explain with algorithm and example?
i) What is distance between pixels? Explain different types of distance with their significance?
j) What is point processing? Why we require point processing?
k) Explain negative operation, log transformation and antilog transformation with suitable example.
l) What is power law transformation? Explain gamma correction?
m) What is thresholding? How intensity level transformation tends to thresholding?
n) What is piecewise linear transformation? Explain?
o) What do you mean by intensity level slicing? Explain Bit plane slicing along with significance of different bit plane.