# 19CSE367 Digital Image Processing

SARATH TV

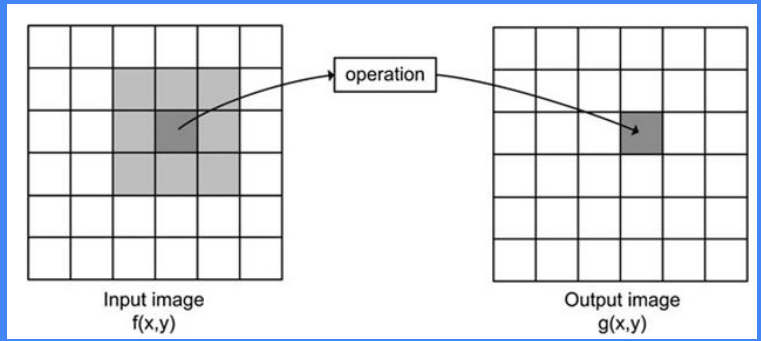
# Last lecture

- Spatial Domain Processing
- Neighborhood
- Intensity Transformations
- Image negative transformation

# Intensity transformations

$$g(x,y) = T[f(x,y)]$$

- $s = T(r)$
- Neighbourhood 1x1 size
- Output image depends only on the values of input image at a single point (x,y)
- Applications of image enhancement.
- Process of manipulating an image – result is more suitable than original for a specific application.
- Why specific → problem oriented.
- T → maps pixel value r into a pixel value s.




- r → intensity of f at any point (x,y)
- s → intensity of g at any point (x,y)

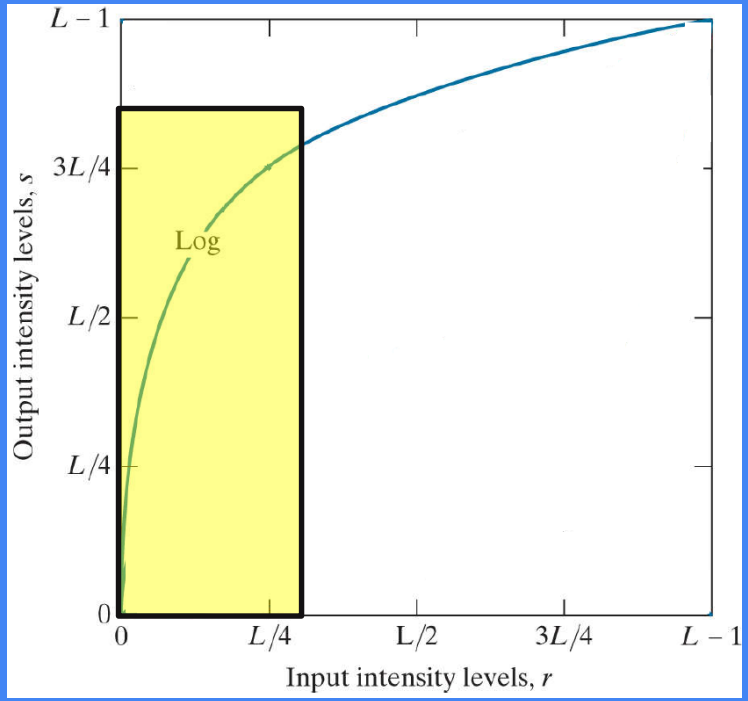
# Log transformations

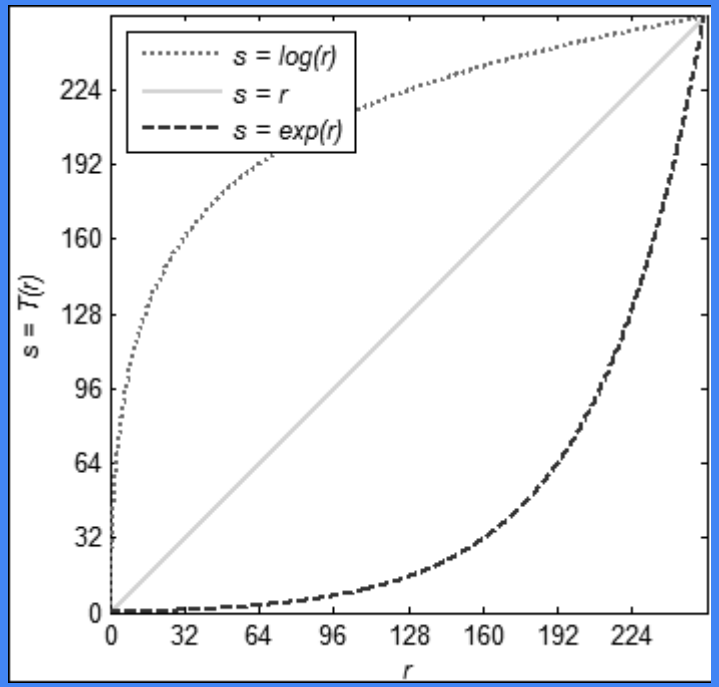
$$s = c * \log(1 + r)$$

$c$ – constant

$r \geq 0$

- Replacing all pixel values, present in the image, with its logarithmic values
- In the input image –low intensity values are mapped into wider range of output levels.
- Used for expand values of dark pixels in an image, but compressing the higher level pixels.






Original Image

Log Transformed

Exponential of Log Transformed


THANK YOU!