* 3. Sigmoid Transformations
  + Please notice the cumulative distribution function of any random process is approximately sigmoid in shape.
  + 4 sigmoid functions
    - Logistic function
      * y = 1 / (1+e^-((x-a)/b))
    - Cumulative Normal Distribution
      * y = cdf(‘normal’, x, a, b)
    - Arctan or Inverse Tan function
      * y = arctan((x-a)/b)
    - Hyperbolic Tan or Tanh function
      * y = tanh((x-a)/b)
    - 0 < (a,b) < 1
* 4. Histogram Specification Transforms
  + The required or specified histogram is q(x
  + Two Steps
    - 1. Perform Histogram equalization
    - 2. Perform New Transform using the inverse of the cumulative distribution Q
  + h = Q^-1 [dot] P(f)
  + Example:
    - Use image lenna.jpg to produce an output image with the following histogram:
      * See class notes