- **Histogram Equalization:**

  Merits:

  Histogram Equalization achieves contrast stretching which the expands the range of intensity levels in an image. It can improve

  1. visibility of washed out images and
  2. enhance intensity variations in low contrast images.

  Limitations:

  1. Eventhough Histogram Equalization cannot make big impact to enhance intensity variations of images which already has significant range of intensity levels, but needs better distribution other than equalization. This is where Histogram Matching becomes handy.

- **Histogram Matching:**

  Merits:

  1. Histogram Matching can help in enhancing images to distinguish visual intensity variations where histogram equalization is unable to create much improvement.
  2. This method can produce different transformation for a given image based on different specified image histograms. Unlike Histogram Equalization which which will return same transformation for a given image.

  Limitations:

  1. The quality of the output image obtained using Histogram Matching will depend completely on the specified image. There is no template for that specified image. This process is more of an exploration until we find the suitable resulting histogram matched result image, which can be used for further Image analysis.