

Training Workshop on Machine Vision (Image Processing Fundamentals)

Activity 4 – Compare contrast stretching, gamma correction and histogram equalization operations on image

Learning outcome: Learn the effect of three contrast enhancement operations on image

Task: The figure below shows the image of a weld radiograph, where the porosity defects are hardly visible. Write OpenCV-Python codes to enhance the image so that the defects in the image are clearly visible. Compare the effects of the three common contrast enhancement operations, namely, contrast stretching, gamma correction and histogram equalization, on the output image and its histogram. Which operation produces the best output image?

