

Abstract

In this final project, enhancement process is implemented on digital image that got disturbance in lighting and noise. Process enhancement in lighting using contrast stretching on RGB color model and saturation-intensity on HIS color model, while noise removal using homomorphic filtering. Parameters that will be used in stretching are contrast, saturation, and intensity. While parameters that will be used in homomorphic filtering are cutoff, order, α_L and α_H .

According to implementation of system builded, stretching and homomorphic filtering could make improvement of image with sufficient of high-performance. The evaluating process which involve images in different classes of blue color, brightness, saturation and noise which is did on calculating of CII and PSNR give good result to another test images. Based on testing, stretching is affected of blend of parameters. Parameters of homomorphic filtering, α_H and α_L , that are assessed by system could provide optimal performance are 2.5 and 0.5-1, while butterworth high pass parameters, cutoff and order, have range 0-500 and 0-6.

Kata kunci: enhancement, *stretching*, *homomorphic filtering*, contrast, saturation, intensity, *cutoff*, α_L , α_H