

CHAPTER 3

RESEARCH METHODOLOGY

1. Literature Study

Collecting journals that discuss about various kind of noise (gaussian noise , speckle noise , salt & pepper noise) , reducing or even eliminate noise with various kind of methods (Gaussian Filtering , Median Filtering , etc) , various parameters as a benchmark (PSNR). All of these journals as a reference for making this program

2. Collecting Sample Image

This project use 20 images , 10 images with salt & pepper noise , 5 images with speckle noise , 5 images with gaussian noise. All images in this project obtained from the web , then it has various color (grayscale / RGB) and resolution , the noise on the image is original not from noise that added manually.

3. Applying Methods

This project use Median Filtering and Gaussian Filtering methods with different size of kernels to reducing noise in images

4. Testing with Median Filtering

Testing is based on the kind of noise , each noise has own testing with Median Filtering using different size of kernels , 3x3 , 5x5 , 7,7 , and 9x9. Then , counting the PSNR value of each processed images

5. Testing with Gaussian Filtering

Testing is based on the kind of noise , each noise has own testing with Gaussian Filtering using different size of kernels , 3x3 , 5x5 , 7,7 , and 9x9. Then , counting the PSNR value of each processed images

6. Report

After get the PSNR value of each image from testing with 2 methods , we can determine the best method for reducing noise in images between Gaussian Filtering method and Median Filtering method by their PSNR value . The better method for reducing noise in images has the higher PSNR value .

