# Abstract

*A good digital image is an image that have a good sharpness and less noise. Sometimes photographic equipment have some limitation in supporting photographers to produce a good image. Some solution to these problems is the image denoising system which can reduce noise while maintaining image sharpness. There are two methods used are Immerkaer's Method for detecting the distribution of noise and Detail Preserving Weighted Mean Filter to perform noise reduction process based on the detection of the noise distribution.*

*Parameters that used for measuring system performance is the Peak Signal to Ratio (PSNR) as an objective assessment parameter and Mean Opinion Score (MOS) as a subjective assessment parameter. Tests performed using the Gaussian noise because this is the noise that we usually encountered in photography.*

*The test results show the system can enhance the image quality by reduce noise and maintain image sharpness well, this improvement is shown by the incease of PSNR value by 14.2073% up to 17,95797% when the result is compared with image before denoising process that given a noise level by 10, this level of damage is often met on real world problems.*
**Keywords**: *Image Denoising,Immerkaer's Method, Detail Preserving Weighted Mean Filter, PSNR, MOS.*