

## AN ADAPTIVE HISTOGRAM EQUALIZATION ALGORITHM FOR ENHANCE MAMMOGRAMS

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Breast cancers are recognized as one of the leading causes of death in most of the western countries and as well as in Sri Lanka. Therefore, recent studies proved that this is a disease which both men and women could have. However, this could be avoided by detecting them in its early stage. There are two distinct methods to detect breast cancers such as Mammography and Sonography. This research will only focus on Mammography which also has the better accuracy on detecting cancers than Sonography. In fact mammography has a higher efficiency in detecting cancers among certain age groups of patients. Radiologists mainly use their professionally trained eyes to detect cancers. But still cancers are hard to detect when they have mammograms with bad image conditions. This is where the mammogram enhancement is essentially needed. Although there are some sophisticated mammogram enhancement algorithms available, this will be the only mammogram enhancement algorithm which uses a histogram based image enhancement. Histogram equalization based image enhancements are not using for delicate work like enhancing mammograms due to its lack of controllability. Obviously it is the major obstacle to use histogram equalization techniques for mammogram enhancement. This study will also suggest methods on solving those issues to develop an adaptive image enhancing algorithm for screening mammograms.

**Keywords:** Enhancement control, General histogram equalization, Genetic algorithms, Histogram equalization, Mammograms