6 CONCLUSION

In this work, a new method was designed and implemented to enhance the MCs in the mammogram images. The new fuzzy logic approach includes four main stages: (1) Preprocessing the mammogram image, (2) Fuzzification mammogram image, (3) Inference Engine, (4) Defuzzification the mammogram image. In the first stage, the artifacts are accurately extracted from the breast region using LT and UT. Then, all the mammogram intensities are represented as fuzzy set. The inference engine is also generated based on using 6561 activation rules. In the final stage, the MC is enhanced after defuzzification the mammogram images.

This algorithm was tested on 190 mammogram images from both USF and MIAS database. As a result, this algorithm can enhance the MCs in mammogram images with an accepted number of false positive enhanced regions but in high processing time.

In the near future work, this work will be modifying this algorithm to accurately enhance the MCs regions by using different mask sizes. Also the hybrid neuro-fuzzy approach will be implemented to reduce the processing time and to increase the performance of the algorithm by accurately enhancing the MCs regions with minimum number of false positive regions.

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