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Radiomics Based Detection and Characterization of Suspicious Lesions on Full Field Digital Mammograms

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Highlights

- Proposed scheme segments out suspicious lesions from digital mammograms automatically using adaptive fuzzy region growing method
- Proposed segmentation scheme incorporates a novel neighboring pixel selection algorithm which reduces computational complexity.
- The segmentation results showed 91.67% sensitivity and 58.33% specificity.
- k-NN and SVM classifiers with radiomic features such as geometric and textural features improves specificity upto 91.67% with False Positives per Image of 0.55 only.
- The radiologists involved in the study have appreciated the potential of the proposed scheme and hence it can be used in a CAD system to assist them in clinical breast cancer diagnosis.

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