Classification of Microcalcification in Digital Mammogram using Stochastic Neighbor Embedding and KNN Classifier

Abstract

Breast cancer has become a common health problem in developed and developing countries during the last decades and also the leading cause of mortality in women each year. Mammogram is a special x-ray examination of the breast made with specific x-ray equipment that can often find tumors too small to be felt. In this paper, the classification of microcalcification in digital mammogram is achieved by using Stochastic Neighbor Embedding (SNE) for reducing high dimensionality data into relatively low dimensional data and K-Nearest Neighbor (KNN) Classifier. This system classifies the mammogram images into normal or abnormal, and the abnormal severity into benign or malignant.
society (MIAS) database is used to evaluate the proposed system. The experiments demonstrate that the proposed method can provide better classification rate.

References

- Peter Mc Leod and Brijesh Verma, "A Classifier with Clustered Sub Classes for the Classification of Suspicious Areas in Digital Mammograms", IEEE conference on Neural Networks, July 2010, pp 1-8.
Index Terms

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Keywords

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