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## Patent Search

Invention Title	A NOVEL FEATURE EXTRACTION AND CLASSIFICATION OF BREAST CANCER USING ENSEMBLE PRE-FULLY CONNECTED LAYERS IN CONVOLUTIONAL NEURAL NETWORK
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#### Abstract:

Breast cancer poses a serious health risk to women and is challenging to treat. Early breast cancer detection has sparked fresh research during the past ten years. It claims that breast cancer can be cured if it is found early. Global mortality is reduced by early disease diagnosis. To identify and track down issues, Computer Aided Detection (CAD) tools are frequently employed. CAD systems have recently been employed to increase study accuracy by the Convolutional Neural Network (CNN). Automated CAD technologies are required to fight against the disease. The present invention disclosed herein is a novel feature extraction and classification of breast cancer using pre-fully connected layers in convolutional neural network comprising of: Input Image (201); Preprocessing (202); Normalization (203); Segmentation (204); Feature Extraction (205); Classification (206); used to extract the feature in the digital mammogram images database to classify the breast cancer. The present invention disclosed herein uses ensemble pre-fully connected layers in convolutional neural network to convert unprocessed samples into more localized representations. The performance analysis proposed invention shows that the accuracy of 98.58%.

#### Complete Specification

Description:FIELD OF INVENTION

The present invention relates to the technical field of Computer Science Engineering.

Particularly, the present invention is related to a novel feature extraction and classification of breast cancer using ensemble pre-fully connected layers in convolutional neural network of the broader field of image processing in Computer Science Engineering.

More particularly, the present invention is related to a novel feature extraction and classification of breast cancer using ensemble pre-fully connected layers in convolutional neural network. The present invention disclosed herein uses fully connected layers initially in the CNN architecture to classify the digital mammogram to detect early cancer.

#### BACKGROUND & PRIOR ART

Images taken in a medical setting are essential for the purposes of diagnosis and treatment. It is also possible to use these images as a teaching tool for medical students. Recent years have seen a meteoric rise in the number of images taken as a result of advancements in digital imaging technology. Medical image analysis is an interesting and important use of computer vision. The term "medical imaging" encompasses the theoretical foundations, practical applications, and creative potential of the im-

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