Identification of Cancer from the Mammogram Images by Using Frequency Domain Approaches

B Kiran Bala[1*] and S Audithan[2]

[1]*Department of Computer Science and Engineering, St.Peter's University, Chennai, India*
[2]*Department of Computer Science and Engineering, Prist University, Kumbakonam, India*
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ABSTRACT

To identify whether the given mammogram image is tumor or cancer by using feature extraction of mammogram image like mass and microcalcification as a parameter from the mammogram images to give exact result to the patient and to avoid the noise, FAR & FRR is the main objective of the paper. In order to process the system MIAS database is used. To extract the feature in this system uses frequency domain for the process of the system.

Keywords: Tumor; Cancer; Mammogram images; Frequency domain
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INTRODUCTION

Proposed System

The system deals with extraction of features like mass and microcalcification is the two main process is available in the proposed system [1,2].
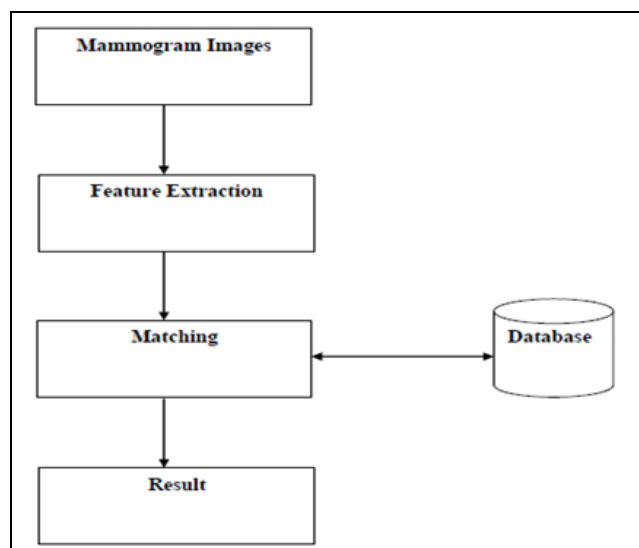

Figure 1: Block diagram

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To extract the features system have frequency domain to identify the mass and microcalcification then match the extracted details with KN map algorithm to extract the accurate details of the system and basic block diagram mentioned in Figure 1 [3-5].

METHODS

Implementation

The implementation for the proposed system is shown in Figure 2. Total proposed system was implemented in MATLAB and result shown in the implementation part.
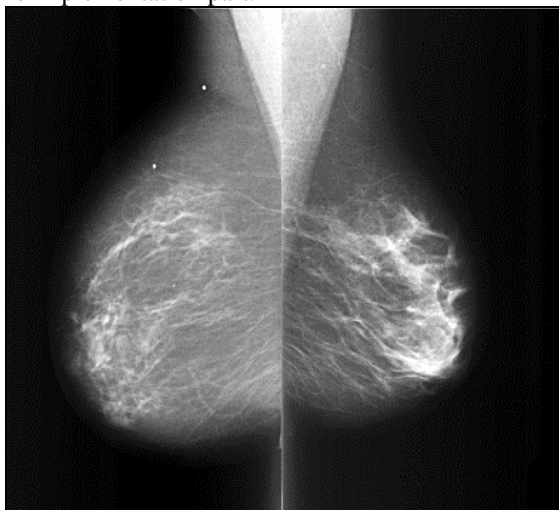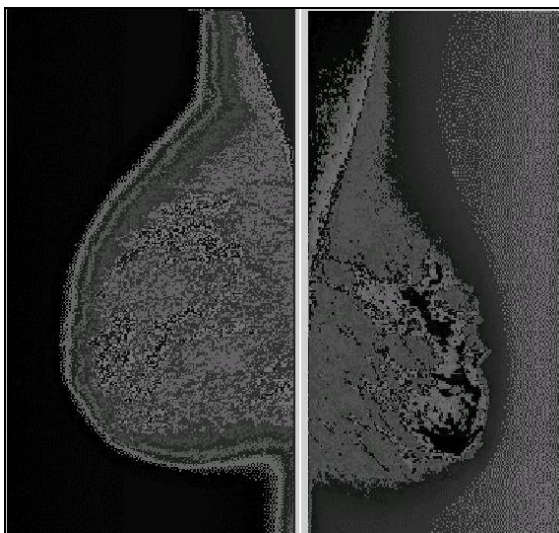

Figure 2: Sample MIAS database image

Figure 3: Feature extracted images

Figure 3 shows the features extracted in mammogram images to identify the given image is tumor or cancer from the given images. The success rate for the proposed system has tested totally 1134 images and all the images got exact notification of the result is achieved (Figures 4 and 5).
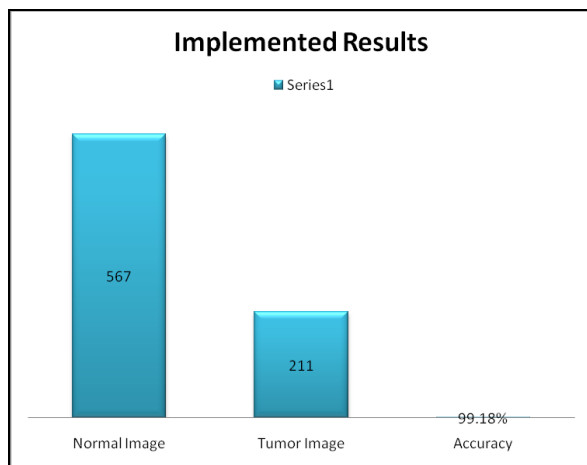
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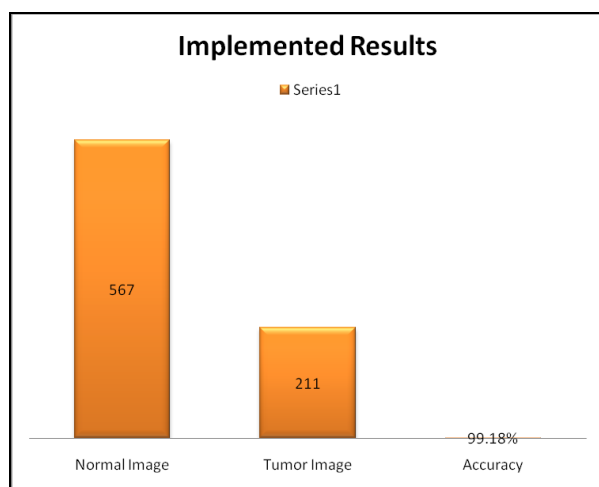**Figure 4: Implemented results for cancer image**

Figure 5: Implemented results for tumor image

CONCLUSION

The proposed system is used to identify the given image is tumor or cancer for that purpose MIAS database is used and features extracted like mass and microcalcification by using frequency domain approaches is used and results shown in the implementation part successfully implemented. The objective to identify the exact disease of patient, FAR and FRR was achieved in the implementation part.

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