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Machine Learning Application Used For Predicting Breast Cancer Using Image Dataset

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ABSTRACT
Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globaly. The main goal in cancer prediction is to extract the affected area of ultrasound breast image and predict growth and type in an accurate manner. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. The raw ultrasound images may not be clear to see the affected part due to pixel resolution and noise, so an additional filtering and enhancing the image quality is needed to remove the unwanted features. For extracting the features from the enhanced image, we apply its featured data to genetic algorithms (GA) and store the features into CNN for classification so the process could complete the operation. So, this kind of innovative system is becoming so helpful in case of emergency to treated in a systematic manner. So, it could lead to an improved service speed for populated hospitals and clinics. So, this can help in understanding how GA and CNN are used to extract feature further classified into segments.

Keywords: convolution neural network (CNN), genetic algorithm (GA), machine learning

1. INTRODUCTION

Human related disease is increasing global. All diseases are not death taken but all are important to detect for a good health issue. So, some of these diseases are verry danger in people which focus more concern. Among these all globally concern disease cancer is one of the important aspects. Cancer is growing in man and women globally but the most focusing one is breast cancer in women. One of the most influencing health issues in women. For a health life of a child is to be health features of women. Several women losses their life due to breast cancer that makes it so terrible. Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globaly. The main goal in cancer prediction is to extract the affected area of ultrasound breast image and predict growth and type in an accurate manner. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. The raw ultrasound images may not be clear to see the

affected part due to pixel resolution and noise, so an additional filtering and enhancing the image quality is needed to remove the unwanted features. For extracting the features from the enhanced image, we apply its featured data to genetic algorithms (GA) and store the features into CNN for classification so the process could complete the operation. So, this kind of innovative system is becoming so helpful in case of emergency to treated in a systematic manner. So, it could lead to an improved service speed for populated hospitals and clinics. So, this can help in understanding how GA and CNN are used to extract feature further classified into segments. Due to increasing population concern it is impossible to detect all women in a manual order for breast cancer. So, the automated system for cancer detection desirable in various hospital and clinic as they are not having other challenging ways to take sample in advanced fashion. World health Organization (WHO) reported that it is increasing cancer amongst Women worldwide and becoming one of the highest tiered diseases of death globally. In many countries also, it has the uppermost proportion of deaths, about 20 %. The data status present an analysis that woman are at risk terrible including many nations in Europe, Asia and the American continent. [1]

In practice many breast cancers are detected in initial stage but more are of its concern till the present date. However, many peoples have no initial symptoms in picture. Hence, routine checkups is very important for early detection. Cancers is the one which causes 30% of the total reasons behind the death caused in the world. Even as per the data provided by the Indian Medical Association the most common cancer caused is the breast cancer especially for the women that is at least 40% of all cancer patients in the females. These patients must undergo a biopsy where the samples of the breast tissues are taken. After this it undergoes the training in the tissues and where the stained images are generated. The proper rate of cell growth reflects a healthy person. Any modification to rate of cell growth led to fatal medical conditions. A cancer can be classified as a malignant, normal, or initial stage. Modern clinics can remedy most benign symptoms of the disease. So early detection is most important processes for symptoms checking.

A Row image of ultrasound breast image is presented below. The affected part is to be measured in the original image.

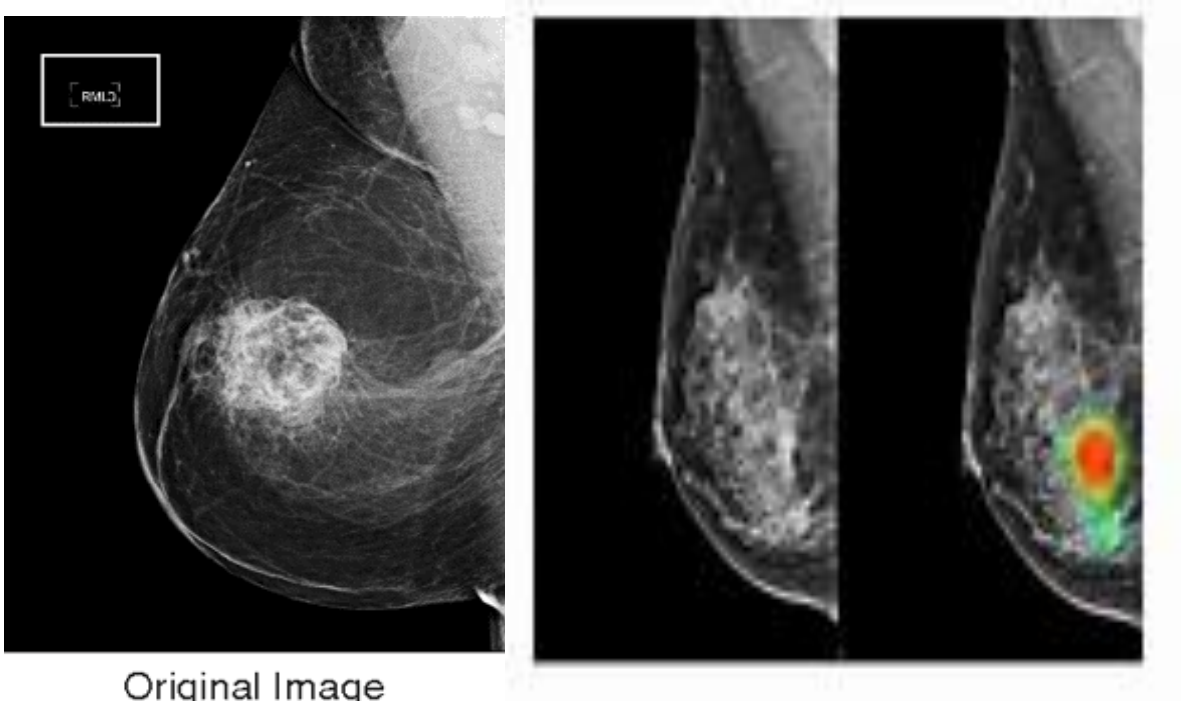

Fig 1. Original and affected breast image

This early prevention can be achieved by imperiling women at initial risk to a mammography in a routine, by many reports it has seen that it takes less than five years for a breast symptom to reach in a developed stage. The only current early detection of breast cancer is regular airing of mammography. This practice has greatly increased the diagnosis of early-detection that formerly evaded medical doctor pending the cancer had gotten lethal phases. [2] [3]

2. DESIGN OF EXPERIMENT/ MATERIAL METHODS

Having defined a model system, the analysis will continue to recommend the kind of equipment desirable to build the planning, the technique needed to execute the framework once it has been framed. The task is extended in such that, within the essentials, the basic measurements and implementation are satisfied. The system was developed using convolution neural networks algorithm. Price and benefit support the formation of the system. As it become a technical task so many platforms and creation are superimposed together to execute the process in running images for output. So, we need to discuss some more important aids that become the key of our project and will explain them further. A good dataset of ultrasound breast image is found from online platform. Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globally. In practice many breast cancers are detected in initial stage but more are of its concern till the present date. However, many peoples have no initial symptoms in picture. Hence, routine checkups is very important for early detection. Cancers is the one which causes 30% of the total reasons behind the death caused in the world. Even as per the data provided by the Indian Medical Association the most common cancer caused is the breast cancer especially for the women that is at least 40% of all cancer patients in the

females. These patients must undergo a biopsy where the samples of the breast tissues are taken. After this it undergoes the training in the tissues and where the stained images are generated. The proper rate of cell growth reflects a healthy person. Any modification to rate of cell growth led to fatal medical conditions. A cancer can be classified as a malignant, normal, or initial stage. Modern clinics can remedy most benign symptoms of the disease. So early detection is most important processes for symptoms checking. The main goal in cancer prediction is to extract the affected area of ultrasound breast image and predict growth and type in an accurate manner. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. The raw ultrasound images may not be clear to see the affected part due to pixel resolution and noise, so an additional filtering and enhancing the image quality is needed to remove the unwanted features. For extracting the features from the enhanced image, we apply its featured data to genetic algorithms (GA) and store the features into CNN for classification so the process could complete the operation. So, this kind of innovative system is becoming so helpful in case of emergency to treated in a systematic manner. So, it could lead to an improved service speed for populated hospitals and clinics. So, this can help in understanding how GA and CNN are used to extract feature further classified into segments.These data are already known to us so that we can also run our system by performing the nearest satisfying operation. Other requirement includes building algorithms and machine learning approach for data training and testing. [4]

2.1 SOFTWARE AND HARDWARE REQUIRMENT

As a part of hardware, we use a system with 2.2 GHz processor, 256 GB of hard disk and a RAM of 4 GB while as a part of Software we can use Windows 10 / Linux that can run Python on it. In practice many breast cancers are detected in initial stage but more are of its concern till the present date. However, many peoples have no initial symptoms in picture. Hence, routine checkups is very important for early detection. Cancers is the one which causes 30% of the total reasons behind the death caused in the world. Even as per the data provided by the Indian Medical Association the most common cancer caused is the breast cancer especially for the women that is at least 40% of all cancer patients in the females. These patients must undergo a biopsy where the samples of the breast tissues are taken. After this it undergoes the training in the tissues and where the stained images are generated. The proper rate of cell growth reflects a healthy person. Any modification to rate of cell growth led to fatal medical conditions. A cancer can be classified as a malignant, normal, or initial stage. Modern clinics can remedy most benign symptoms of the disease. So early detection is most important processes for symptoms checking. Some Toolbox and software implementation that are suitable for image processing and segmentation are paying a key role for project. OpenCV-Python is used to process the work. [5] [6]

2.2 SYSTEM DESIGN

The Fig 2 shows the Flow diagram of training and testing phase of our proposed system. Input images are taken as initial input in both training and testing. In the process we need to

demonstrate a process in which image is pre-processed by applying some techniques such as image enhancement could be done so that it is easier to extract the all-possible feature from it, histogram equalization and filtering for noise removal of the raw image are performed.

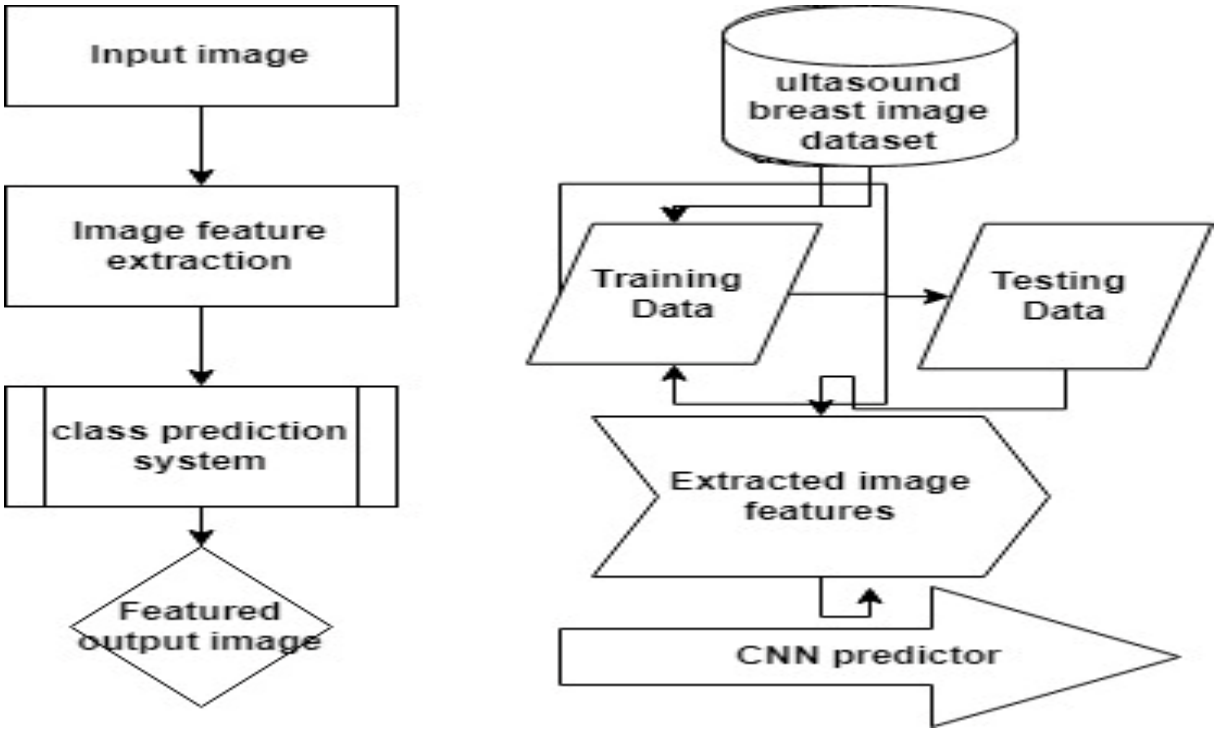

Fig 2. Design and Testing Flow Diagram

In other step the enhanced image is segmented and the features are extracted using feature extraction algorithms. The classification using CNN is done. On the result of classification, the result is to be performed and further make the prediction of stage of the disease. In more detail the input and output process of our proposed system is drawn in Fig 3. [7] Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globaly. The main goal in cancer prediction is to extract the affected area of ultrasound breast image and predict growth and type in an accurate manner. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. In practice many breast cancers are detected in initial stage but more are of its concern till the present date. However, many peoples have no initial symptoms in picture. Hence, routine checkups is very important for early detection. Cancers is the one which causes 30% of the total reasons behind the death caused in the world. Even as per the data provided by the Indian Medical Association the most common cancer caused is the breast cancer especially for the women that is at least 40% of all cancer patients in the females. These patients must undergo a biopsy where the samples of the breast tissues are taken. After this it undergoes the training in the tissues and where the stained images are generated. The proper rate of cell growth reflects a healthy person. Any modification to rate of cell growth led to fatal medical conditions. A cancer can be classified as a malignant, normal, or initial stage. Modern clinics can remedy most benign symptoms of the disease. So early detection is most important

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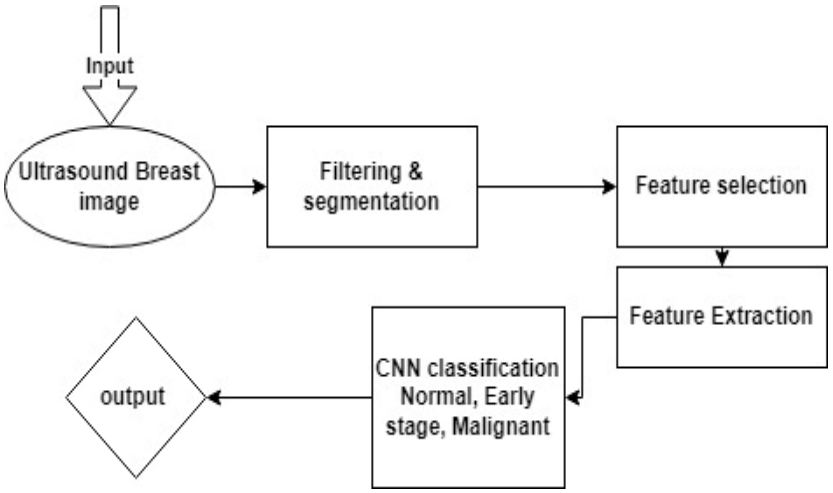

Fig 3. Input output processing block diagram

After having design, a block diagram of the system proposed we need to explain the process in more detail. Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globaly. The main goal in cancer prediction is to extract the affected area of ultrasound breast image and predict growth and type in an accurate manner. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. The raw ultrasound images may not be clear to see the affected part due to pixel resolution and noise, so an additional filtering and enhancing the image quality is needed to remove the unwanted features. For extracting the features from the enhanced image, we apply its featured data to genetic algorithms (GA) and store the features into CNN for classification so the process could complete the operation. So, this kind of innovative system is becoming so helpful in case of emergency to treated in a systematic manner. In practice many breast cancers are detected in initial stage but more are of its concern till the present date. However, many peoples have no initial symptoms in picture. Hence, routine checkups is very important for early detection. Cancers is the one which causes 30% of the total reasons behind the death caused in the world. Even as per the data provided by the Indian Medical Association the most common cancer caused is the breast cancer especially for the women that is at least 40% of all cancer patients in the females. These patients must undergo a biopsy where the samples of the breast tissues are taken. After this it undergoes the training in the tissues and where the stained images are generated. The proper rate of cell growth reflects a healthy person. Any modification to rate of cell growth led to fatal medical

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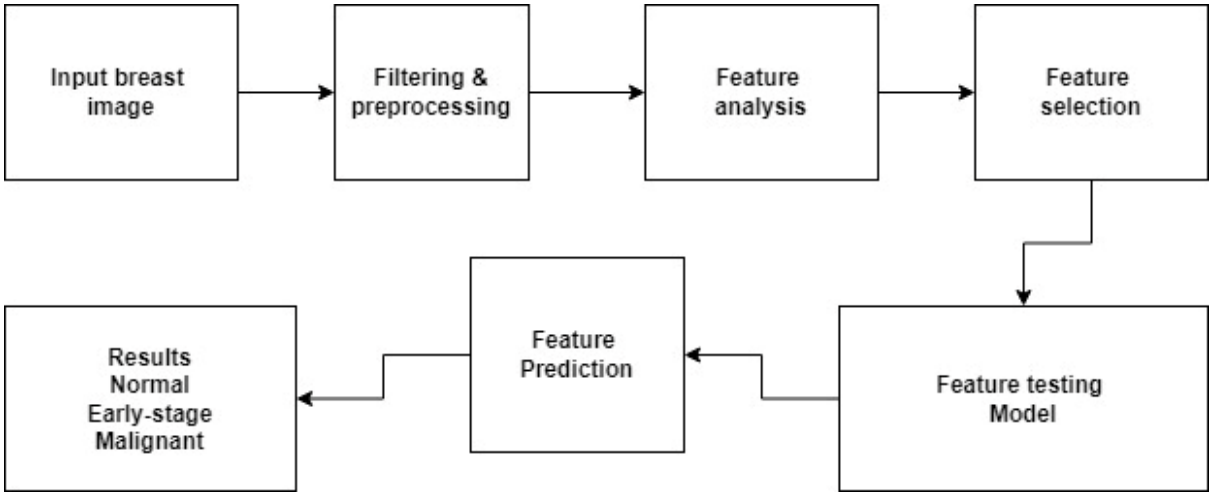

Fig 4. DFD of proposed system

2.3 SYSTEM IMPLEMENTATION

Nowadays nearly all vast technology forms their project-based on GA and CNN. we must know to idea on how the human brain recognizes an object using CNN and feature detection using GA are topic of interest how to fit the medical data on them. Our brains complex layer of neurons is shown below, as we can see in CNN diagram (Fig 5). Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globaly. The main goal in cancer prediction is to extract the affected area of ultrasound breast image and predict growth and type in an accurate manner. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. The raw ultrasound images may not be clear to see the affected part due to pixel resolution and noise, so an additional filtering and enhancing the image quality is needed to remove the unwanted features. For extracting the features from the enhanced image, we apply its featured data to genetic algorithms (GA) and store the features into CNN for classification so the process could complete the operation. So, this kind of innovative system is becoming so helpful in case of emergency to treated in a systematic manner. In practice many breast cancers are detected in initial stage but more are of its concern till the present date. However, many peoples have no initial symptoms in picture. Hence, routine checkups is very important for early detection. Cancers is the one which causes 30% of the total reasons behind the death caused in the world. Even as per the data provided by the Indian Medical Association the most common cancer caused is the breast cancer especially for the women that is at least 40% of all cancer

patients in the females. These patients must undergo a biopsy where the samples of the breast tissues are taken. After this it undergoes the training in the tissues and where the stained images are generated. The proper rate of cell growth reflects a healthy person. Any modification to rate of cell growth led to fatal medical conditions. A cancer can be classified as a malignant, normal, or initial stage. Modern clinics can remedy most benign symptoms of the disease. So early detection is most important processes for symptoms checking. So, it could lead to an improved service speed for populated hospitals and clinics. So, this can help in understanding how GA and CNN are used to extract feature further classified into segments. layers has information about features and how they are stored in our brain memory, so that when we see the seen object the brain tournaments the reserved features to classify the object. [10]

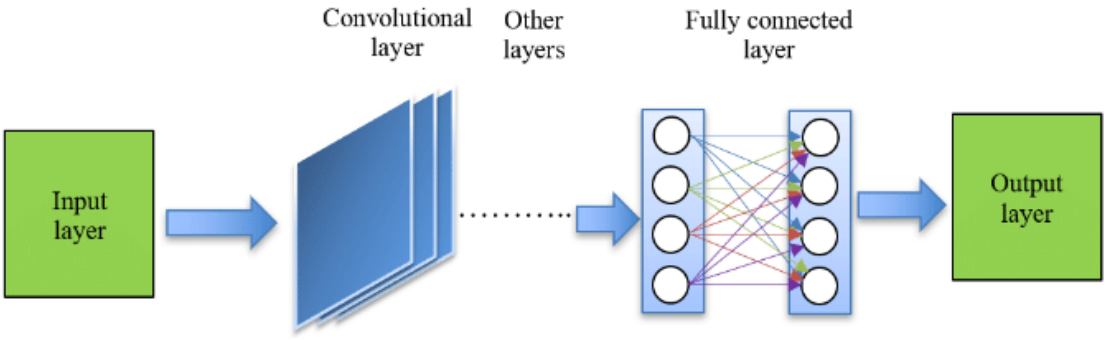

Fig 5. Layer diagram of CNN

GA is being used for feature extraction based on various properties and features are segmented using CNN. reading images would involve a 3-D matrix which can help in reducing the performance. Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globaly. The main goal in cancer prediction is to extract the affected area of ultrasound breast image and predict growth and type in an accurate manner. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. The raw ultrasound images may not be clear to see the affected part due to pixel resolution and noise, so an additional filtering and enhancing the image quality is needed to remove the unwanted features. For extracting the features from the enhanced image, we apply its featured data to genetic algorithms (GA) and store the features into CNN for classification so the process could complete the operation. So, this kind of innovative system is becoming so helpful in case of emergency to treated in a systematic manner. So, it could lead to an improved service speed for populated hospitals and clinics. So, this can help in understanding how GA and CNN are used to extract feature further classified into segments. GA is using its feature extraction process and distributing features in various segments. Any corrupted or blurred images from the database before given it as input into the neural network is to be filtered and enhanced.

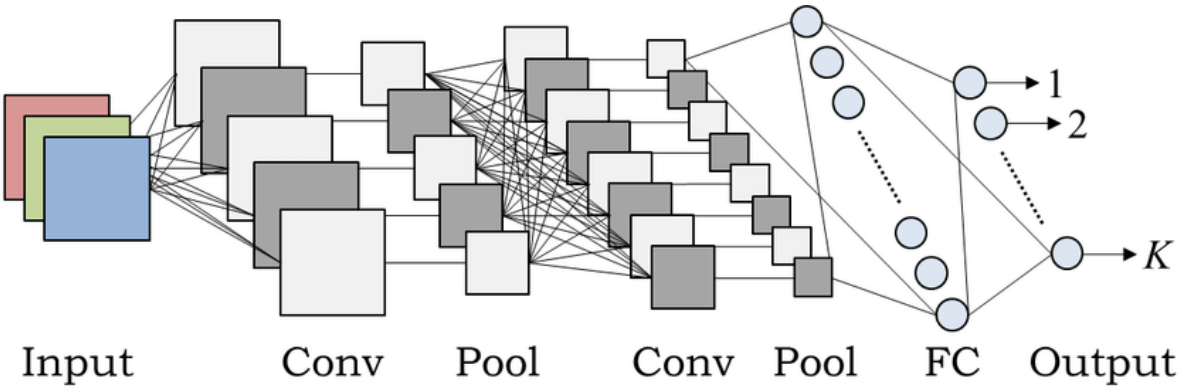

Fig 6. CNN LAYERS OF OUR SYSTEM.

A multiple layers CNN was used in our proposed work so it performs classification phase. Pooling layer is taking count on image segmentation Succeeding the convolution. the values are normalized into Activation layer, or fit into a specific range. Fully connected layer is used to test image's features. Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globaly. The main goal in cancer prediction is to extract the affected area of ultrasound breast image and predict growth and type in an accurate manner. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. The raw ultrasound images may not be clear to see the affected part due to pixel resolution and noise, so an additional filtering and enhancing the image quality is needed to remove the unwanted features. For extracting the features from the enhanced image, we apply its featured data to genetic algorithms (GA) and store the features into CNN for classification so the process could complete the operation. So, this kind of innovative system is becoming so helpful in case of emergency to treated in a systematic manner. So, it could lead to an improved service speed for populated hospitals and clinics. So, this can help in understanding how GA and CNN are used to extract feature further classified into segments. This CNN will be used in training as well as testing phase of our system after feature segmented was completed using GA.

3. LITERATURE SURVEY

In the recent years researchers have done a lot of work on cancer detection processes so in breast cancers. As it becoming the most terrible disease in last few years worldwide. Researchers are focusing on to build a user-friendly clinical detection system that is simpler for one clinical person to operate. So will discuss here some important work that have taken important in simple detection process for the purpose of breast cancer detection. This early prevention can be achieved by imperiling women at initial risk to a mammography in a routine, by many reports it has seen that it takes less than five years for a breast symptom to reach in a developed stage. The only current early detection of breast cancer is regular airing of mammography. This practice has greatly increased the diagnosis of early-detection that formerly evaded medical doctor pending the cancer had gotten lethal phases.

Melanie et al. [4] in their fuzzy based “BREAST CANCER DETECTION USING IMAGE

PROCESSING TECHNIQUES" has designate the use of fuzzy based segmentation models and crisp k-nearing neighbour (KNN) based classification algorithm for supplementary for digital breast cancer mammograms. operates on ultrasound images for Mammography Screening. they only used intensity as the refined feature They stated that supervised and unsupervised methods-based segmentation in mammograms will work with high misclassification rates when working with a big dataset. other methods are needed to detect smaller pathologies such as microcalcifications. the KNN algorithm can meaningly decrease the mislabelled pixels with respect to positive regions within the image region-based features techniques are suggested to improve the segmentation.

In another review as "Breast Cancer Detection: A Review on Mammograms Analysis Techniques", Boulehmi Hela, Mahersia Hela, Hamrouni Kamel, Boussetta Sana and Mnif Najla [4] have given an idea of the current phenomena of the Breast cancer between females over the decades. Also debated the Studies that have shown early detection and treatment of breast cancer suggestively increase the balances of survival. However, the interpretation of mammograms difficult because of small changes in densities of tissues inside the image. Their analysis could provide better understanding, if it is detected at an early stage, a better projection inducing a significant reduction in mortality. In their conclusion they outcome that Breast examination techniques have been improved over the years. But, there still are issues in developing better techniques of contrast enhancement, segmentation, and classification for approximated feature extraction. This early prevention can be achieved by imperiling women at initial risk to a mammography in a routine, by many reports it has seen that it takes less than five years for a breast symptom to reach in a developed stage. The only current early detection of breast cancer is regular airing of mammography. This practice has greatly increased the diagnosis of early-detection that formerly evaded medical doctor pending the cancer had gotten lethal phases.

Yousif A. Hamad, Konstantin Simonov and Mohammad B. Naeem [12] in their project "Breast Cancer Detection and classification Using Artificial Neural Networks "have stated an assumption that Image feature processing procedures are important in the diagnostics bugs and nursing the patients. The method met a detecting approach to the diagnosis of breast tumors integrates with some noise removal steps, followed by defrayal features and better appearances of therapeutic images for a right diagnosis using balance contrast enhancement procedures. The results of this stage are unprotected to image segmentation using Fuzzy C-Means clustering arrangement and Thresholding method to segment the out morphological features of the breast Tumor in the ultrasound images. At the end, the artificial neural network was used to classify the point of Breast tumors that is gentle, malignant, or normal. The early detection of phase is helpful like other proposed so. Probabilistic Neural Network with radial base purpose was laboring to device an mechanical feature classification. The replicated outcomes revealed that classifier and segmentation procedure provide better accurateness than preceding method. This system classifies images features into 3 categories: normal, benign, and malignant with a rate above 85%. Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globaly. The main goal in cancer prediction is to extract the affected area of

ultrasound breast image and predict growth and type in an accurate manner. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. The raw ultrasound images may not be clear to see the affected part due to pixel resolution and noise, so an additional filtering and enhancing the image quality is needed to remove the unwanted features. For extracting the features from the enhanced image, we apply its featured data to genetic algorithms (GA) and store the features into CNN for classification so the process could complete the operation. So, this kind of innovative system is becoming so helpful in case of emergency to treated in a systematic manner. So, it could lead to an improved service speed for populated hospitals and clinics. So, this can help in understanding how GA and CNN are used to extract feature further classified into segments.

In the work Breast Cancer Detection Using RBF Neural Network - Mahendra G. Kanojia, Siby Abraham [7] have constructed a system and explained Breast cancer is the most frequently diagnosed growth and the important cause of cancer among women. With the advances in digital image techniques, it is common to strategic the computer assisted diagnosis. The integral guess of their work is that image-processing and RBFN can be used to detect malevolence in raw breast images. The proposed work gives an automated detection of menace using both image processing techniques and RBFN. It is evident there are no conclusive penalties on correctness in image diagnosis.

4. TESTING

Black-Box Testing and White-Box Testing was performed to check the internal construction efficiency of the system as well as validation of the system. This early prevention can be achieved by imperiling women at initial risk to a mammography in a routine, by many reports it has seen that it takes less than five years for a breast symptom to reach in a developed stage. Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globaly. The main goal in cancer prediction is to extract the affected area of ultrasound breast image and predict growth and type in an accurate manner. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. The raw ultrasound images may not be clear to see the affected part due to pixel resolution and noise, so an additional filtering and enhancing the image quality is needed to remove the unwanted features. For extracting the features from the enhanced image, we apply its featured data to genetic algorithms (GA) and store the features into CNN for classification so the process could complete the operation. So, this kind of innovative system is becoming so helpful in case of emergency to treated in a systematic manner. So, it could lead to an improved service speed for populated hospitals and clinics. So, this can help in understanding how GA and CNN are used to extract feature further classified into segments. The only current early detection of breast cancer is regular airing of mammography. This practice has greatly increased the diagnosis of early-detection that formerly evaded medical doctor pending the cancer had gotten lethal phases. We found that for a dataset of 100 images we can build our system with an accuracy of 90-95 % for training data. If we try the same system for training with some different image, we could reach an accuracy of 75-85

from system. This result may very if the testing data match the training data.

Table 1: testing results

Testing	Training Model	Testing Model
White box testing	95 >=	85 >=
Black box testing	90 >=	75 >=

5. RESULTS

We extract the image feature of our interest by giving some threshold value in a colour RGB image. We employed machine learning algorithms to predict whether a tumour is benign, malignant, or normal based on the features provided by the data, because early detection of malignancy is critical for effective treatment of breast cancer so our main idea was to find the malignant feature extracted image for our system. Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globaly. The main goal in cancer prediction is to extract the affected area of ultrasound breast image and predict growth and type in an accurate manner. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. In practice many breast cancers are detected in initial stage but more are of its concern till the present date. However, many peoples have no initial symptoms in picture. Hence, routine checkups is very important for early detection. Cancers is the one which causes 30% of the total reasons behind the death caused in the world. Even as per the data provided by the Indian Medical Association the most common cancer caused is the breast cancer especially for the women that is at least 40% of all cancer patients in the females. These patients must undergo a biopsy where the samples of the breast tissues are taken. After this it undergoes the training in the tissues and where the stained images are generated. The proper rate of cell growth reflects a healthy person. Any modification to rate of cell growth led to fatal medical conditions. A cancer can be classified as a malignant, normal, or initial stage. Modern clinics can remedy most benign symptoms of the disease. So early detection is most important processes for symptoms checking.

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6. CONCLUSIONS

An innovative idea of breast cancer detection has been proposed and developed utilizing Convolutional Neural Networks. This technique divides mammography pictures into three categories: normal, benign, and malignant. This early prevention can be achieved by imperiling women at initial risk to a mammography in a routine, by many reports it has seen that it takes less than five years for a breast symptom to reach in a developed stage. The only current early detection of breast cancer is regular airing of mammography. This practice has greatly increased the diagnosis of early-detection that formerly evaded medical doctor pending the cancer had gotten lethal phases. Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globally. The main goal in cancer prediction is to extract the affected area of ultrasound breast image and predict growth and type in an accurate manner. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. The raw ultrasound images may not be clear to see the affected part due to pixel resolution and noise, so an additional filtering and enhancing the image quality is needed to remove the unwanted features. For extracting the features from the enhanced image, we apply its featured data to genetic algorithms (GA) and store the features into CNN for classification so the process could complete the operation. So, this kind of innovative system is becoming so helpful in case of emergency to treat in a systematic manner. So, it could lead to an improved service speed for populated hospitals and clinics. So, this can help in understanding how GA and CNN are used to extract feature further classified into segments. We give a value of threshold to classify the symptom type for training data. Every person can do a simple diagnosis using the system, which can assist and help the doctor or specialized nurse to speed diagnose the mammography, to cover shortages of specialists or time handling diagnoses. The results may increase if the system is built on selecting more features of an image. But our proposed system works more reliably with compared to idea existing behind in our field. So, our work is seeming to be doing good with these selected features. The more accurate algorithm is to be constructed based on more features so that the accuracy is increased. Cancer is one of the most immediate deaths causing disease from all other disease. Breast cancer is a leading disease if we see its data globaly. The main goal in cancer prediction is to extract the affected area of ultrasound breast image and predict growth and type in an accurate manner. In practice many breast cancers are detected in initial stage but more are of its concern till the present date. However, many peoples have no initial symptoms in picture. Hence, routine checkups is very important for early detection. Cancers is the one which causes 30% of the total reasons behind the death caused in the world. Even as per the data provided by the Indian Medical Association the most common cancer caused is the breast cancer especially for the women that is at least 40% of all cancer patients in the females. These patients must undergo a biopsy where the samples of the breast tissues are taken. After this it undergoes the training in the tissues and where the stained images are generated. The proper rate of cell growth reflects a healthy person. Any modification to rate of cell growth led to fatal medical conditions. A cancer can be classified as a malignant, normal, or initial stage. Modern clinics can remedy most benign symptoms of the disease. So early detection is most important processes for symptoms

checking. As in this highly populated world it is needed a system that can use a digital image and scan it in a simple operating manner to extract the affected part of the image. The raw ultrasound images may not be clear to see the affected part due to pixel resolution and noise, so an additional filtering and enhancing the image quality is needed to remove the unwanted features. For extracting the features from the enhanced image, we apply its featured data to genetic algorithms (GA) and store the features into CNN for classification so the process could complete the operation. So, this kind of innovative system is becoming so helpful in case of emergency to treated in a systematic manner. So, it could lead to an improved service speed for populated hospitals and clinics. So, this can help in understanding how GA and CNN are used to extract feature further classified into segments.

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