

The project title is Advanced breast cancer prediction using deep learning and the team members are C. ALekya, K.Vidhathri, S.Nandini, C. Sireesha, T. Yasoda.

Main aim of this project is to classify and predict the breast cancer with deep learning as breast cancer is one of the most frequently diagnosed cancer among women in 140 of 184 countries.

To make this project a success, our team has collaboratively worked on data collection, data preprocessing, model building, Application building with an eye on the recent methods that have been introduced for breast cancer prediction namely CNN, DNN, RNN, DBN, and AE based approach. When it comes to data collection, we have made use of one of the most prominent datasets application - Kaggle and then edited it into test folders to train for the next process data pre processing and the next stage model building was done in the default structure by building CNN network and the application part has been developed using HTML - the scripting language and Flask.

Elaborating the code, at the beginning we have mounted the drive in the google colab and imported our OS. Here, as the next step we have created a base directory and then train directory and test the folders, here comes the two classes in it - Benign and Malignant. Upon configuring the classes we bring in the images we have in the training set. We print the images and few of them are displayed, next we import the tensor flow package.

Tenserflow is an open source library specifically for Machine Learning in AI. Then imported emerge data generator, specifically used for rescaling the images. The matrices used to measure CNN model. The True positives (+ve) and true negatives (-ve) should be higher and false positives and false negatives should be lower for a CNN model.

Next we have accuracy precision recall AUC and trained the model. So, here we have layers of convolution and then we have pooling layer, flattened layer, densed layer and then we have configured Early step Parameter after running the model we received the accuracy score.

After generating, we have received two positives (+ve) and two negatives (-ve) at a higher rate and then we have around 84 % accuracy and testing data has 89%, precision around 92 AUC and 87% sensitivity. Then load and save the mode

286% is increases if the diagnosis is done earlier. Here we have the problem statement and our proposed solution is to build an convolutional network and for empathy mass canvas it was done an mutual template along with the members and these are functional and non functional requirements. We have optimized our API for this codes and these are some of the matrices that we have used to assist the model and this is our data folder structure which is using around 2k images for training and 700 images for testing and these are output snapshots.

So, coming to advantages it is basically automated diagnosis. Hence, when we see a machine that could potentially tell the answer for our query so that means we saved our time but

one of the main disadvantage is that the data is mostly it can't put it in to black and white and there is huge imbalance of data set. This could lead to lesser accuracy when it comes to detecting a malignant cancer.

So, for a conclusion we have given a over view and for future scope may be we have techniques for the better data and equalize the class imbalance and we have attached the link for the code as well and I believe we have evaluated or created a CNN model and trained with good accuracy.

Thank

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