ABOUT OUR PROJECT:

Breast cancer can become a severe illness if not identified and treated early, and once it reaches an advanced stage, it is considered incurable. Our proposal aims to introduce an automated approach that utilizes deep learning and machine learning techniques to detect breast cancer.

OUR APPROACH:

Our breast cancer detection solution involves training Logistic Regression, SVM, and Decision Tree models on a diverse dataset. Ensembling is done via stratified k-fold cross-validation to combine predictions. A Convolutional Neural Network (CNN) is then trained on augmented data from k-fold CV. The final CNN model is evaluated on separate test data and deployed for breast cancer detection.

TECHNOLOGY STACK:

System front end: HTML, CSS, JS

System back end: Python 3, Open CV, Django

AI models: Support Vector Machine, Logistic regression, Decision tree and Convolutional neural network.

METRICS:

Accuracy, Sensitivity (Recall), Specificity, Precision, F1 Score, Area Under the Receiver Operating Characteristic Curve (AUC-ROC) and Confusion Matrix are the metrics that our problem can be represented.The Accuracy of our project is 98.57%.