

ABSTRACT

Breast cancer remains one of the top diseases that lead to thousands of death in women every year. Artificial intelligence (AI) has been utilized for diagnosis early, rapidly, and accurately breast tumours. The objective of this project is to review recent studies for classifying these tumours. Machine learning algorithms such as Support Vector Machine (SVM), K Nearest Neighbour (K-NN), and Random Forest (RF) are used to classify medical images into malignant and benign. Moreover, deep learning has been employed recently for the same purpose, among them, Convolutional Neural Network (CNN) is one of the most popular techniques. The results showed that the SVM achieved high accuracy, about 97%, therefore, the researchers utilized various functions for this algorithm and added more features such as bagging and boosting to increase its efficacy. In addition, deep learning obtained high accuracy using CNN which is higher than 98%. Breast cancer is the most common type of cancer with women are affected in the world. Mammography is regarded as an effective tool for early detection and diagnosis of breast cancer. The most common breast abnormalities that may indicate breast cancer are masses and micro-calcifications or calcifications.