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cancelled - Breast Cancer Prediction using Machine Learning Algorithms - A Deep Learning Approach

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Breast Cancer is the deadliest and commonly diagnosed cancer in women globally. Early diagnosis and treatment of breast cancer increases the chance of a five-year survival rate by 99%. Recent technological and computational advancement have led to the discovery of machine learning algorithms for the analysis of complex data. Machine learning algorithms have been widely applied for the analysis of breast cancer data. In this paper, we propose to implement machine learning algorithms, using a deep learning approach, for automatic detection and prediction of breast cancer using mammogram images. To achieve this, we implement transfer learning on a deep learning algorithm called Convolutional Neural Network (CNN). Two datasets of breast cancer images are analyzed using three CNN models in existing deep learning frameworks. The models perform a binary and multiclass classification task on the images. Experimental results showed that CNN models can accurately identify and predict breast cancer when provided with a large and balanced dataset.

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