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Breast Cancer Detection Using Machine Algorithms

Mr. R. Ramarajesh[1], S. Divya[2], A. J. Louisa Merline[3]
Assistant Professor, Department of Information Technology[1]
Students, Department of Information Technology [2,3]
Anjalai Ammal Mahalingam Engineering College, Thiruvarur, India

Abstract: *The most frequently occurring cancer among Indian women is breast cancer. There is a chance of fifty percent for fatality in a case as one of two women diagnosed with breast cancer deaths in the cases of Indian women. This paper aims to present a comparison of the largely popular machine learning algorithms and techniques commonly used for breast cancer prediction, namely Random Forest, KNN (k-Nearest-Neighbor), Support Vector Machine, and XG Boost techniques. The Wisconsin Diagnosis Breast Cancer data set was used as a training set to compare the performance of the various machine learning techniques in terms of keyparameters such as accuracy and precision. The results obtained are very competitive and can be used for detection and treatment. Breast cancer disease causes a massive number of deaths in the world. After the traditional cancer detection methods, the latest technologies enable experts with numerous adaptive methods to discover breast cancer in women. Breast cancer affects the majority of women worldwide, and it is the second most common cause of death among women. Breast cancer is among the most serious illnesses/diseases in India, causing many deaths in the current situation. Due to changes in food and lifestyle, the number of cancer cases in women is increasing day by day. Different types of machine learning are implemented for the prediction of breast cancer with a high accuracy rate. We develop different machine learning algorithms for the prediction of breast cancer.*

Keywords: Machine Learning, Breast Cancer, random forest, k-Nearest- Neighbor, XG Boost Technique, Support Vector Machine.

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