ورود حسين عبد علي
Supervisor Dr. Wael Abbas Hanoun

Machine learning aided detection of breast cancer on the Wisconsin data set a feature selection approach

Abstract

breast cancer is a major health issue for women all over the world. Effective care and better patient outcomes depend on early identification and precise risk prediction. Machine learning algorithms and merging large data have recently emerged as potential ways to predict and classify breast cancer risk. This research aims to investigate the feasibility of using Machine learning and big data fusion for risk prediction and categorization of breast cancer.

The key focus is use a reliable and precise models by combining the best features of predict and diagnose breast cancer cells. The proposed work considers three critical identification phases to achieve greater accuracy: data re-processing, feature extraction, and target role. The Wisconsin breast cancer diagnostic data was used for testing the proposed method.

It is also compared in terms of performance with other classification methods like Decision Tree, Random Forest, Naive Bayes, K-Nearest Neighbors, Support Vector Machines, Ada boost, and XGBoost. This research aims to determine which characteristics are most beneficial in predicting cancer as malignant or benign. We show that some Machine learning has an impressively high accuracy score of 99.84% using Python Programming .