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COMPARATIVE ANALYSIS OF SUPERVISED MACHINE LEARNING ALGORITHMS FOR DIABETES PREDICTION

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ABSTRACT

Because of its increasing prevalence and the implications that are associated with it, diabetes mellitus, which is a chronic metabolic disorder that is characterized by hyperglycemia, poses a significant threat to the health of people all over the world. Forecasting diabetes in a manner that is both accurate and timely is absolutely necessary for effective management and preventative approaches. Through the application of machine learning methods, this study comes up with a model that can accurately predict diabetes. The predictive model utilizes supervised machine learning techniques, specifically Decision Tree, Naïve Bayes, Artificial Neural Network, and Logistic Regression. These techniques are applied to provide accurate predictions. A number of performance criteria, like as accuracy, recall, precision, and F-score, have been utilized in order to carry out the comparison of different techniques.

Keywords: Supervised Learning, Accuracy, Precision, Recall, Diabetes