

# Abstract

The concept of machine learning has quickly become very attractive to the healthcare industry. Predictions and analyzes made by the research community on medical data sets help with appropriate care and precautions in the prevention of disease. of machine learning, the types of algorithms that can help make decisions and predictions. We also discuss various applications of machine learning in the medical field, with a focus on diabetes prediction through machine learning. Diabetes is one of the most increasing diseases in the world and it requires continuous monitoring. To check this, we explore various machine learning algorithms which will help in early prediction of this disease. This work explains various aspects of machine learning, the types of algorithm which can help in decision making and prediction. The predictions and analysis made by the research community for medical dataset support the people by taking proper care and precautions by preventing diseases. Discuss various applications of machine learning in the field of medicine focusing on the prediction of diabetes through machine learning. Diabetes is one of the fastest-growing diseases in the world and requires constant monitoring. To verify this, we are exploring different machine learning algorithms that will help with this baseline prediction. Keywords: Decision Support Systems, Diabetes, Machine learning, Support vector Machine, K-Nearest Neighbor, Logistics Regression