**SMART CROP RECOMMENDATION SYSTEM USING MACHINE LEARNING**

**ABSTRACT**

Agriculture being the backbone of the Indian Economy faces multiple challenges in the food production and prediction sectors due to the unnatural climatic changes, which reduces crop yield adversely. Farmers lack the knowledge and help to forecast the future crop yield and take the necessary precautions. This project aims to guide farmers in the choice of crops to be grown by predicting the suitable crops for a given region by incorporating supervised machine learning algorithms which are one of the advanced technologies in crop prediction. The seed data of the crops are collected here, with the appropriate parameters like temperature, humidity, soil Ph, rainfall, nitrogen, potassium and phosphorus content which supports its maximal growth. Based on the obtained data the crop prediction is carried on. This is provided along with the performance metrics of the system. Performance of Naïve bayes Classifier, AdaBoost Classifier, Decision Tree Classification, Voting Classifier algorithms are compared and based on the accuracy, precision, recall, F1 score and confusion matrix. Decision tree classifier algorithm is chosen as the best algorithm for crop prediction and the model is hence deployed with it.