ABSTRACT

Farming is the pillar of the Indian economy and more than 50% of India's population are dependent on agriculture for their survival. The impact of climate change in India, most of the agricultural crops are being badly affected in terms of their performance over a period of last few decades. Variations in weather, climate, and other such environmental conditions have become a major risk for the healthy existence of agriculture. Machine Learning algorithms have emerged as promising alternative and complimentary tools to the commonly used modelling approaches in agriculture and allied sciences. It attempts to solve the issue by building a prototype of an interactive prediction system. For data analytics in crop prediction there are different algorithms, and with the help of those algorithms we can predict crop and yield. To predict the crop and yield we use Random forest algorithm, support vector machines, decision tree algorithm. By analysing all these issues and problems like weather, temperature, humidity, rainfall, moisture, there is no proper solution and technologies to overcome the situation faced by us. Data mining is also useful for predicting crop yield production. Data mining is the process of analysing data from various viewpoint and summarizing it into important information. Random forest is the most popular and powerful and regression tasks, that operate by constructing a multitude of decision trees during training time and generating output of the class that classification or regression of the individual trees. This project will help the farmers to know the yield of their crop before cultivating onto the agricultural field and thus help them to make the appropriate decisions.

Key words : Indian Agriculture, Machine Learning Techniques, KNN, RF