**Farming Made Easy using Machine Learning**

**ABSTRACT**

Agriculture is the primary mainstay of the economy in our country. In recent years because of uncertain trends in climate and other fluctuations in the price trends, the price of the crop has varied to a larger level. Farmers remain oblivious of these uncertainties, which spoils the crops and causes massive loss. They are unaware of the crop type which would benefit them most. Due to their limited knowledge of different crop diseases and their specific remedies, crops get damaged. This system is handy, easy-to-use. It provides accurate results in predicting the price of the crop. This framework utilizes Machine Learning’s Decision Tree Regression Algorithm to predict crop price. The attributes considered for prediction are rainfall, wholesale price index, month, and year. Consequently, the system gives an advance forecast to the farmers' which grows the speed of profit to them and consequently the country's economy. This system also incorporates other modules like weather forecast, crop recommendation, fertilizer recommendation, and shop, chat portal, and guide are also implemented.

EXISTING SYSTEM:

We have used Python for basic programming in all modules. Flask is used for hosting. Socket Programming is used for a chat application. Chart.js is used for visualizing the maps. JavaScript is used for validation purposes.

For Weather Forecast [12] and fertilizer shop location, we have used APIs. Using the self-made dataset and concept of linear regression in machine learning we have implemented a Crop recommendation model so that a farmer can learn about the best suited crop for a particular region. In Fertilizer Recommendation we have used a dataset for predicting which fertilizer should be used for the disease present on crops. Socket programming is used for farmers interaction using provided chat application [3]. Google API is used for providing a multilingual website for ease to read.

PROPOSED SYSTEM:

In this paper author is using various machine learning algorithms such as Random Forest, Decision Tree and KNN to predict crop prices. All this algorithms get train on Crop Prices dataset which contains crop details weather details such as Rainfall and below screen showing dataset details with crop name, market name with prices and Rainfall

**SYSTEM REQUIREMENTS:**

**HARDWARE REQUIREMENTS:**

* System : MINIMUM i3.
* Hard Disk : 40 GB.
* Ram : 4 GB.

**SOFTWARE REQUIREMENTS:**

* **Operating System:** Windows 8
* **Coding Language**: Python 3.7