Abstraction of Project

Project Topic:-Crop Yield Prediction System

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Problem

As day by day everything is getting automated, but till now farmers are not able to predict how much wholesale price for crops they are producing after farming. In India weather conditions are not in a regular pattern. So how to predict the price on the basis of past date, month and year?

Solution

For this problem we have to develop AI/ML models through which the model can predict the wholesale price index on the basis of some parameters or inputs. Along with this model we will also develop a GUI part where a farmer can give inputs for predicting and the output will be shown on a popup box after the process is completed.

Inputs are: -

* Rainfall
* Month
* year

Technology stack:-

* Python programming language
* Libraries:- Numpy, Pandas, SKlearn, Tkinter
* Tools:- pycharm / jupyter

**Steps in doing this machine learning model and getting the outputs**

**First Step: -** We have to collect data’s from different sectors or dataset.

**Second Step: -** We have to preprocess those data’s present in the dataset.

**Third Step: -** Then we will choose a ML algorithm for making a model.

**Fourth Step: -** Training of the 60% of the data will be done.

**Fifth Step: -** In this step evaluation of a model will be done on the basis of accuracy, precision and recall.

**Sixth Step: -** Hyperparameter optimization or tuning is the problem of choosing a set of optimal Hyperparameter for a learning algorithm. A Hyperparameter is a parameter whose value is used to control the learning process.

**Seventh Step: -** In this, prediction will be done by using the remaining percent of datas. Prediction refers to the output of an algorithm after it has been trained on a historical dataset and applied to new data when forecasting the likelihood of a particular outcome.

**Datasets Used:-**

* Different crops dataset

**USE CASE DIAGRAM**

