A model to analyze interpret activities of agriculture fraternity with data interpretation

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Abstract
In Agriculture, field farmers and agriculture, fraternity has to take impotent decisions every day. In our country, farmers are not getting the expected price from their crops. Crop price mostly depends on the market and the weather. Any farmer is enthused about knowing how a great deal of crop price he will foresee. Previously, the yield figure was performed by contemplating a farmer's understanding of the explicit field and collect. The crop price prediction is a serious problem that remains to be resolved based on statistical data. Tracking patterns, visualization and other techniques of data mining is the best option for solving this problem. This proposal implements a system to predict crop prices based on the last 10-year data. This is done through the use of various data mining techniques. This research focuses on future crop price prediction base on every dependent factor. If we have the previous year data available in which corresponding crop prices are recorded and this recoded price will help to classify crop price.
Keywords: Data Mining, Crop Price, Data Mining techniques, visualization techniques of Data mining, Tracking Patterns of Data mining, regression analysis techniques of Data mining.

Introduction

In farming field farmers and farming fraternity apply impotent decisions of crop selling every time. In our country, farmers are not getting the expected price from their farming crops. Agricultural field-crop price mostly depends on the market and the weather of current season. Any farmer is enthused about knowing how a great deal of crop price he will foresee. Previously, the yield figure was performed by contemplating a farmer's understanding of the explicit field and collect. Agricultural field-crop price forecasting is a genuine problem that remains to be determined based on statistical data. Tracking patterns, visualization and other techniques of data mining is the best option for solving this problem using computer application. This proposal implements a system to predict crop prices based on the last 10-year agricultural field-crop data and weather condition with rain data. This is done through the use of various data mining techniques. This research paper focuses on future crop price prediction base on every dependent factor. If we have the last 10-year Agricultural field-crop price data and weather data are available and this recoded price and weather information will help to classify crop price.

Today there is no fully computerized system for price and crop planning. Currently, the farmer or agriculture fraternity goes to the nearest market and sell the product. Currently, there is no sure about future crop price and not facility is present for the farmers to know the product price at other markets where they can sell their products for achieving high profits.

India is the largest agricultural powerhouse worldwide and the leading producer of spices, pulses, and milk. Not only that, our country has the largest area that is used to cultivate cotton, wheat, and rice. The agriculture sector employs more than 40-45 percent of the total workforce in India and contributes around 17-18 percent to the country's GDP.

Related Work

The research aims to predict both the agricultural field-crop price and agricultural field-crop time frame of the crop before crop sowing via Tracking patterns, visualization and other techniques of data mining. Farmers also decide the best time to sell their products. current prediction was performed by thinking about the farmer's and farming fraternity comprehension of a farming field. Be that as it may, as the conditions change step by step quickly, ranchers are compelled to develop an ever-increasing number of yields. Being this as the present circumstance, a significant number of them need more information about the new harvests and are not totally mindful of the advantages they get while cultivating them. Additionally, the ranch profitability can be expanded by comprehension and estimating crop execution in an assortment of natural conditions.

A few work done based on agricultural crop price forecasting represent in table. This show that if crop price is predicate then how to increase farmer return and planning for crop storage time.

Author(s)	Year	Techniques used	Paper Title	Main Areas focused
Nitin Pandey; S.K. Khatri	2019	Decision making support model	Decision Making Support System for Prediction of Prices in Agricultural Commodity	Select deferent commodity price and predicted crop price
Guangyu Ding & Liangxi Qin	Nov-2019	Deep recurrent neural network and Associated neural network model	Study on the prediction of stock price	How computer applications are used for stock market price predication

			based on the associated network model of LSTM	
Swapnil Shrivastava Supriya N. Pal Ranjeet Walia	2019	Recurrent Neural Network and Auto Regressive Integrated Moving Average	Market Intelligence for Agricultural Commodities Using Forecasting and Deep Learning Techniques	Deep learning techniques are used for smart farming and how to overcome challenges for price predication.
YiranLiu, QinglingDuan, DongjieWang, ZhentaoZhang, ChunhongLiu	February 2019	support vector regression	Prediction for hog prices based on similar sub-series search and support vector regression	Forecasting hog crop price and Farmer applies impotent decisions of crop selling every time.
Aman Vohra, Nitin Pandey, S.K. Khatri	4-6 Feb. 2019	ARIMA model, neural networks and PLS regression	Decision Making Support System for Prediction of Prices in Agricultural Commodity	Price forecasting for agricultural crop has become the need of the hour for farmers and farming fraternity.
Djodiltachoumy	2016	Neural networks, biclustring, k-means, k-nearest neighbour Naive Bayes Classifier and support vector machine are useful techniques for prediction in agricultural commodities	Analysis of Data Mining Techniques for Agriculture Data. International Journal of Computer Science and Engineering Communications	Data mining and its techniques is the process of extracting past agriculture crop price data and useful information from large sets of data.
Author(s)	Year	Techniques used	Paper Title	Main Areas focused
Nitin Pandey; S.K. Khatri	2019	Decision making support model	Decision Making Support System for Prediction of Prices in Agricultural Commodity	Select deferent commodity price and predicted crop price
Guangyu Ding & Liangxi Qin	Nov-2019	Deep recurrent neural network and Associated neural network model	Study on the prediction of stock price based on the associated network model of LSTM	How computer applications are used for stock market price predication
Swapnil Shrivastava Supriya N. Pal Ranjeet Walia	2019	Recurrent Neural Network and Auto Regressive Integrated Moving Average	Market Intelligence for Agricultural	Deep learning techniques are used for smart farming and how to overcome

			Commodities Using Forecasting and Deep Learning Techniques	challenges for price predication.

TABLE 2.1 WORK DONE BASED ON AGRICULTURAL CROP PRICE

Review of the literature in the agriculture field crop price predication

Data Mining and its techniques is used extensively for agricultural field crop price predication. Data Mining techniques are applying to analyze large data sets and start useful classifications and find hidden pattern in the crop price. The final aim of the Data Mining process is to derived the data from a data set and transform it into an unambiguous format for agricultural field-crop price at upcoming market price [5]. Agricultural field-crop price analysis used various techniques of data mining such as K-Nearest Neighbor (KNN), regression analysis, Tracking Patterns, Tracking Patterns and visualization [6].

this research aims to answer the following questions:

1. Farmer and agriculture fraternity get a report of future price bases on various factors and fast recorded data.
2. The farmer can plan crop base on predicted market price.
3. Farmer and agriculture fraternity plans for a storage time frame for the high price of their crop.
4. Data mining and its techniques

Data mining is the way toward seeing enormous arrangements of data in an alternate manner with the goal that new data can be gotten from that which as of now exists. As such, you compose and perceive so as to anticipate. Data mining is defined as a process used to find usable information from a big data set of any raw information. It implies patterns in large batches of data using one or more computer application. Data mining has computer software in multiple fields, like Agriculture, medical, science and research. As computer software of data mining, farmer and agriculture fraternity can learn more about forecasting of crop price.

List of data mining techniques are Data cleaning and preparation, Regression, Classification, Clustering, Sequential patterns, Neural networks, Decision trees, Long-term memory processing, Machine learning, Visualization, artificial intelligence, Tracking patterns, Outlier detection, Association, Prediction and Statistical techniques. Most suitable techniques identified for agricultural field-crop price predication as bellows.

Regression analysis

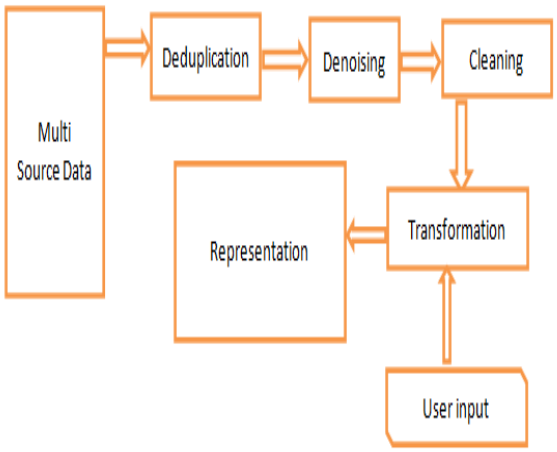
This analysis technique is one of the most useful techniques for forecasting modeling. Regression analysis is use to forecast a range of numeric or continuous value. Linear regression is used to guess an association between two variables. This technique uses the numerical blueprint of a straight line (y=mx+b).

Tracking patterns

This is a primary and more useful data mining technique for predict agricultural field-crop price. Once farmer or agricultural fraternity identifies a trend in agricultural field crop price data, for instance, there is a ground for taking action to predict crop price. Tracking Patterns determine that a certain weather condition or crop available stock is more affected selling price. Agriculture fraternity and farmer can use this knowledge to manage crop production or storage time frame for the better price.

The design-methods and procedures

The researches proposed predict agricultural field-crop price and agricultural field-crop time frame use of data mining techniques. It's processed to take data from the various data sources and input from users. Create graphical and textual output for farmers and farming fraternity. This design-method is first find Agriculture fraternity requirement using text input or graphics input and identity data sources and formats. Find duplication of data comes from various data source and removes unnecessary data from data set using denoising method of data mining. Build requirement model and data structurer and again take input from farmers and farming fraternity for comprehension of a farming field and produce final result. It is processed to fetch data from the various data sources as well as input from users and create graphical and textual output for the user. The proposed algorithm design based on data mining techniques.



Proposed crop price predication using data mining techniques.

Conclusion

This paper tries to finalized which data mining techniques is use for predict agricultural field-crop price and review of data mining techniques involved in price predication as well as importance resolve issue of agriculture field. This research clearly defines which data mining techniques more useful for predication base on existing data of agriculture filed crop price and weather condition of current year or session. This system main aim is to the farmers and farming fraternity getting high amount of their crop and storage time for batter price of crop. Forecasting base on computer application is more growing concept in last few years due to increasing demand and supply of agricultural field-crop.

Limitations

- Data set may not contain proper data.
- Some input is given by farmer they may not be proper base on farmer knowledge
- The effects of climate change.
- Models based on past observations will become less relevant.
- Particularly, the extent and rapidity of these changes
- More significant if crop optimal location, management techniques, or disease progresses at greater speed

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