

Farmer Portal – A Machine Learning Based Portal

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Abstract – In India, agriculture plays an important role in in economy and employment. The common drawback faced by the farmers is that they can't take the proper selection concerning the crop supported in their regions and market and profit price. Hence they face less productivity and fewer profit. The purpose of this paper is to present an attempt to predict crop yield and price, using machine learning, helps them to choose the crop in keeping with the soil kind, weather condition. The farmers do not have a one window which might cater to their all desires regarding to crop, market price, soil type, government schemes, latest news etc. to make this simple to the farmers the portal is projected that uses machine learning. The system essentially works associate assistant to the farmer in whole year serving them to remain tuned to the something that will have an effect on crop and profit. The responses area unit created on the premise on the premise machine learning algorithms used around the knowledge set. The most audience is farmers the other user can also uses this portal to induce recommendation associated with the agriculture

Key Words: -Crop-recommender, Machine Learning, React, Progressive net App, API.

1. INTRODUCTION

Compared to varied alternative sectors of economy, agriculture is exclusive, whose output is essentially smitten by climate. The degree of success of agriculture production and its political economy is decided to a major extent by however well climate admire the optimum necessities of the crop area unit best exploited to boost the crops. Also, however effectively adverse climate, that cause wetness, thermal, wind, radiation and bio-tic stress preventative growth and development of crop area unit managed to attenuate their adversity. any to the current, it conjointly depends on management aspects of preventing the crops from severe climate. "Agriculture is that the backbone of the Indian Economy. Even today, things continues to be constant, with nearly the whole economy being sustained by agriculture, that is that the mainstay of the villages. It contributes Sixteen Personality Factor Questionnaire of the general gross domestic product and accounts for employment of roughly fifty two of the Indian population. ascent in agriculture is important not just for independence however conjointly to earn valuable interchange. A unique user friendly portal for farmers that suggest crops in keeping with the state, profit etc. The Farm Portal ought to facilitate farmers get

updates relating to all the agriculture connected news and conjointly shows the climate of a selected space to that the farmer gets crop suggestion consequently. These results are within the variety of net. and therefore the format are terribly compressed one that won't need additional cupboard space.

2. MOTIVATION

Historically, the farmer uses the various modules for the crop recommendation, weather prediction. There's not one window answer for all the farmers' issues. Within the existing system there's associate solely weather prediction is finished. That mean we will get solely climate. Time consumption for presidency policies. Farm portal ought to facilitate farmers get updates relating to all the agriculture connected news and policies, conjointly shows the climate of a selected space to that the farmer gets crop suggestion consequently. Motivation behind this portal is to supply farm portal that is useful to farmer to induce additional profit and obtain updates of agriculture connected news and policies.

3. LITERATURE SURVEY

Saurabh Chaturvedi, Weather Forecasting mistreatment Machine Learning algorithmic rule, 978-1-5386-9436-7/19/\$31.00 ©2019 IEEE.

The activities of the many primary sectors depend upon the weather for production, e.g. farming. The climate is ever-changing at a forceful rate today, that makes the previous weather prediction strategies less effective and additional agitated. to beat these difficulties, the improved and reliable weather prediction strategies area unit needed. These predictions have an effect on a nation's economy and therefore the lives of individuals. To develop a forecasting system that may be utilized in remote areas is that the main motivation of this work. the information analytics and machine learning algorithms, like random forest classification, area unit accustomed predict weather. During this paper, a affordable and moveable answer for weather prediction is devised.

Yung-Hsing Peng, Chin-Shun Hsu, and Po-Chuang Huang, Developing Crop value prognostication Service mistreatment Open knowledge from Taiwan Markets TAAI2015 Tainan, Taiwan Nov. 20-22, 2015.

The algorithms enforced during this paper area unit the autoregressive integrated moving average (ARIMA), the partial least sq. (PLS), and therefore the artificial neural network (ANN). Additionally, for PLS we tend to additional integrate the response surface methodology (RSM), account afresh algorithmic rule RSMPLS, by that the non-linear relationship between historical costs may be investigated. we tend to compare the performance of those four algorithms with the value knowledge obtained from the primary Fruit and Vegetable Wholesale Market in Taipei. The experimented crops area unit cabbage, bok choy, watermelon, and cauliflower. in line with the experimental results, PLS and ANN area unit of lower error in percentages. Additionally, PLS and ANN area unit suggested for brief term and future prognostication, severally.

Aakash G Ratkal, Gangadhar Akalwadi, Vinay N Patil and Kavi Mahesh, Farmer's Analytical Assistant, 2016 IEEE International Conference on Cloud Computing in rising Markets.

About half the population of Asian nation depends on agriculture for its resource, however its contribution towards the gross domestic product of Asian nation is simply fourteen per cent. One attainable reason for this can be the dearth of adequate crop coming up with by farmers. There's no system in situ to advice farmers what crops to grow. During this paper we tend to gift a trial to predict crop yield and value that a farmer will acquire from his land, by analyzing patterns in past knowledge. we tend to create use of a window non-linear regression technique to predict supported various factors moving agricultural production like precipitation, temperature, market costs, space of land and past yield of a crop. The analysis is completed for many districts of the state of India. Our system intends to recommend the simplest crop selections for a farmer so as to handle the prevailing socio-economic crisis facing several farmers nowadays.

S.Pudumalar*, E.Ramanujam*, R.Harine Rajashree C.Kavya T.Kiruthika J.Nisha Crop Recommendation System for Precision Agriculture, 2016 IEEE Eighth International Conference on Advanced Computing (ICoAC).

Precision agriculture may be a fashionable farming technique that uses analysis knowledge of soil characteristics, soil types, crop yield knowledge assortment and suggests the farmers the proper crop supported their site-specific parameters. This reduces the incorrect selection on a crop and increase in productivity. during this paper, this downside is solved by proposing a recommendation system through associate ensemble model with majority option technique mistreatment Random tree, CHAID, K-Nearest Neighbor and Naive Bayes as learners to advocate a crop for the location specific parameters with high accuracy and potency.

Divya Sawant, Anchal Jaiswaly, Jyoti Singhz, Payal Shah, AgriBot - associate intelligent interactive interface to help farmers in agricultural activities, 2019 IEEE city Section Signature Conference (IBSSC)

To make this knowledge analysis simply accessible to the farmers a chatbot is projected that uses the tongue process technique. It helps to urge responses of the farmer input queries concerning agricultural context in audio format, therefore on create farmer interaction additional user friendly. If the system fails to answer any nominative question, the question is redirected to helpline centers. The system primarily works as a virtual, handy assistant to help farmers throughout the year serving to them keep notified of any issue that will have an effect on crop productivity and profit. The responses area unit generated supported varied machine learning algorithms modelled around knowledge set. although the most audience into consideration area unit farmers the other user can even use the system to urge recommendation concerning activities associated with agriculture.

Xu Bai, Yun Liu, Yijie Cheng, Zhiyun Ma, Zhe Yan analysis on the govt Agriculture Investment potency below "China's New traditional.

This paper analyzes this scenario of China's government investment in agriculture below the new economic norm and uses the power unit model to estimate the equilibrium relationship between total agricultural output worth, agricultural and biological science meteorologic expenditure, agricultural capital technology value and agricultural comprehensive development fund. The results show that the investment of agricultural science and technology has {an obvious|a clear|an apparent|an below standable|a comprehensible|a lucid|a noticeable|an evident|a plain|a visible} impact on the full agricultural output worth under the new economic norm. The conclusion can offer a reference for the formulation of relevant agricultural investment policies in China.

4. PROBLEM STATEMENT

The development of the a farmer portal supported the machine learning, that may assist the farmer is crucial. All the users of the platform are able to read the portal any time .furthermore, this portal ensures that each one info relies on the previous analysis. .In the farmer portal, a farmer can able to get relevant info on specific subjects around his village/block/district or state.

5. PLATFORM FUNCTIONALITY

Practicality The platforms functioning is contains 2 varieties of actors(farmer and admin) .

Admin practicality includes:

♣ Update the data within the portal the data should get on the premise of last ten year analysis.

♣ Provide the data needed by the farmers.

Farmers functionality:

♣ Obtaining info a couple of crop via portal. additionally obtains the weather info by visiting the map.

6. EXSISTING SYSTEM

SYSTEM there's several computerised system for the farmer which give crop prediction, crop news, weather one by one not at time. Farmers ought to visit totally different places for all this work. Many times, farmer aren't even responsive to the schemes and compensation provided by government.

7. PROPOSED SYSTEM

The farm portal could be a distinctive user friendly portal for farmers that recommend crops in keeping with the situation, profit, etc. The Farm Portal ought to facilitate farmers get updates concerning all the agriculture connected news and conjointly shows the atmospheric condition of a selected space to that the farmer gets crop suggestion consequently. This portal provides additional and additional advantages to farmers .and for that they are doing not have to be compelled to go several places . Conjointly they are doing not have to be compelled to pay money for it. System aims to assist the farmer for good move whereas predicting the crop

8. APPLICTION

- Crop recommender system
- News.
- Weather report.
- Government policies.
- User feedback

9. FUTURE WORK

1. Language Translation API for the website.
2. Dataset to bet appended from the user after their individual experience for an efficient algorithm.
3. Customized timeline for each user according to all the crops he/she chooses.
4. Inspirational DIYs for quick urban terrace farming.
5. A local buy and sell Zero-Merchant online Grains/ Vegetables/ Fruits mart for a better income to the local farmers

10. CONCLUSIONS

The projected system helps the farmer for crop prediction, weather forecasting, news analysis and far additional. The construct of farm portal is framed, which is able to have several options. During this system we have a tendency to ar merging completely different farm connected work along in one portal. Thus, the person needn't have to be compelled to go to completely different places for varied functions. The person will attend one single portal and may use a similar portal for several functions. The new distinctive farmer portal that facilitates one window resolution to farmer for crop recommendation, weather prediction, farming connected news and policies

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