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Smart Kisan Suvidha Application Using Machine Learning

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ABSTRACT: Smart Kisan Suvidha Application is a digital platform for Agriculture services under a single roof. It will bring evolution in agriculture. It will get in touch in the farmers and customers through digital platform. It is platform for farmers to connect directly with their buyers for selling their products at better competitive rates. It will be easy for the buyers to get agricultural information, to compare the rates of products at one place and get profitable deals. It is an opportunity for managing business from anywhere. The digitalization and internet spread in rural areas allow farmers and customers to gain access to information, services and markets. And connect with the buyer. It will lower the cost of transportation for the sellers. Farmers can connect with Agri-Experts for agricultural problems, solutions, etc. Digitalization will make these things easy and accessible for farmers and customers. Development of nation depends on development of agriculture

KEYWORDS: Kisan Suvidha, e-commerce, online portal, Digital bazaar, Agriculture

I. INTRODUCTION

Agriculture being the backbone to India. There exists a responsibility on us to not break the chain from agriculture for the further upcoming generations. In the IEEE paper of agriculture marketing using web and mobile based technologies, it tells us about the marketing being based on the values, policies which involve offering a fair price to the farmer for their crop cultivated. This becomes beneficial for both the consumers as well as the farmers. Using this platform it acts as a motivation for the farmers and also encourages them to do farming as providing a fair price for their crops
Kisan Suvidha is a platform where farmers connect with retailers, traders, wholesaler for selling agriculture produce at better and competitive rates.

Kisan Suvidha Bazar is a platform where farmers connect with retailers, traders, wholesaler for selling agriculture produce at better and competitive rates.

II. RELATED WORK

In [1], This Paper proposed idea is E-market is to develop an Application which will help civilian; the farmer will get best from his input. The project "Smart E-Marketing in Agricultural" is Mobile application which maintains a transparency between the Farmer and civilian. This application also makes a selection for civilian for the farmer's requirement and to make it easy. With the help of this application farmer can be able to know the best value for his products cheat by the marketers. This application makes the farmers requirement become easy . By using this application farmers can get the complete information about eradicating black marketing and inflation. It helps in proper maintenance of data and information. One can easily browse through the various details using the well defined interfaces provided by the system. It is used by all over India's farmer and the basic advantages are it is feasible in all languages and also including the voice recognition for illiterate farmers . Then finally the payment process will be proceeding in online mode.
In [2],Farmers are growing same crops repeatedly without trying new verity of crops and they are applying fertilizers in random quantity without knowing the deficient content and quantity. So, this is directly affecting on crop yield and also causes the soil acidification and damages the top layer. So, the author designed the system using machine

learning algorithms for betterment of farmers. Our system will suggest the best suitable crop for particular land based on content and weather parameters. And also, the system provides information about the required content and quantity of fertilizers, required seeds for cultivation. Hence by utilizing our system farmers can cultivate a new variety of crop, may increase in profit margin and can avoid soil pollution.

Machine Learning Algorithm for Prediction: - Machine learning predictive algorithms has highly optimized estimation has to be likely outcome based on trained data. Predictive analytics is the use of data, statistical algorithms and machine learning techniques to identify the likelihood of future outcomes based on historical data. The goal is to go beyond knowing what has happened to providing a bestassessment of what will happen in the future. In our system we used supervised machine learning algorithm having subcategories as classification and regression. Classification algorithm will be most suitable for our system. ➢ Rainfall prediction: -SVM algorithm. ➢ Crop prediction: - Decision tree algorithm

In [3], Agriculture is the pillar of the Indian economy and more than 50% of India's population are dependent on agriculture for their survival. Variations in weather, climate, and other such environmental conditions have become a major risk for the healthy existence of agriculture. Machine learning(ML) plays a significant role as it has decision support tool for Crop Yield Prediction (CYP) including supporting decisions on what crops to grow and what to do during the growing season of the crops. The present research deals with a systematic review that extracts and synthesize the features used for CYP and furthermore, there are a variety of methods that were developed to analyze crop yield prediction using artificial intelligence techniques. The major limitations of the Neural Network are reduction in the relative error and decreased prediction efficiency of Crop Yield. Similarly, supervised learning techniques were incapable to capture the nonlinear bond between input and output variables faced a problem during the selection of fruits grading or sorting. Many studies were recommended for agriculture development and the goal was to create an accurate and efficient model for crop classification such as crop yield estimation based on the weather, crop disease, classification of crops based on the growing phase etc., This paper explores various ML techniques utilized in the field of crop yield estimation and provided a detailed analysis in terms of accuracy using the techniques.

In [4], E-commerce is clearly beginning to have a major impact in the agricultural sector. The way people go about purchasing agricultural products is of great concern. Most of the time customers have to travel far distances to get agricultural products and getting the right quality is not ensured. Our project aims to help farmers as well as customers for buying and selling agricultural products across the country using a computerized approach. The website will guide the farmers to access new farming techniques, compare current market rate of different products, the total sale and the earned profit for the sold products. The website builds a platform for farmers to ensure greater profitability through end user communication. The website will act as a unique and secure way to perform agro-marketing

III. PROPOSED ALGORITHM

● **Login for Admin**
After creating a profile they will put up there requirement of a crop which will be displayed to farmer. Farmers will respond to this. This will appear to the retailer. There can be number of farmers who responded. Retailer will select which crop he likes the most and contact the farmer.

● **Login For Farmers**
In this farmer will create their profile. After creating a profile there will be details about different retailer, wholesaler and there like which type of crops they want. So farmer just have to click on apply and fill his details.

● **Crop Predication using Decision Tree Algorithm**
Crop Predication will help farmer in growing crop suitable to the climatic condition and soil condition which will eventually increase the yield of the field.

● **Agri Expert**
Agriculture Expert can give agricultural information, agricultural knowledge and problems solutions to farmers through the portal. It will have a discussion corner where we can discuss your problems or you can put your problems in Agri-Question which will be answered by Expert through call.
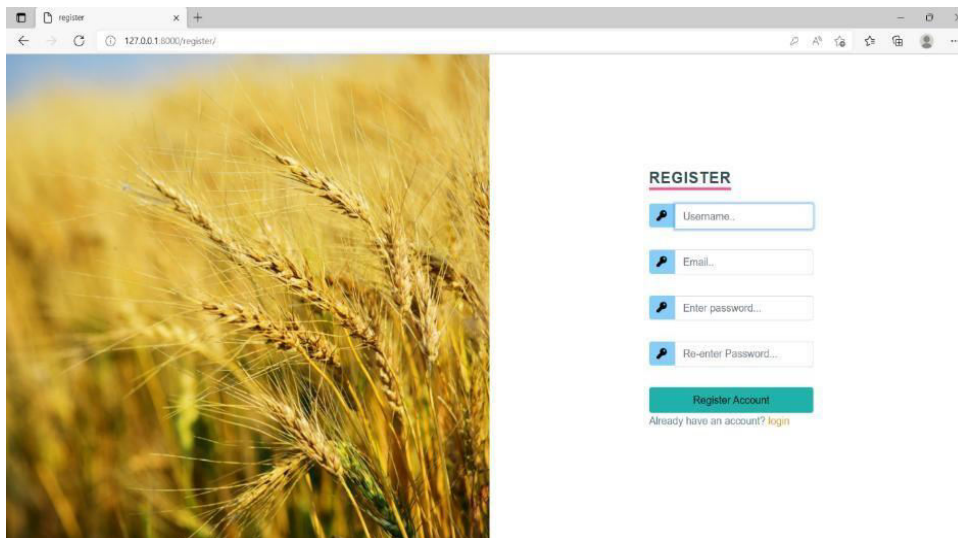
Flowchart:
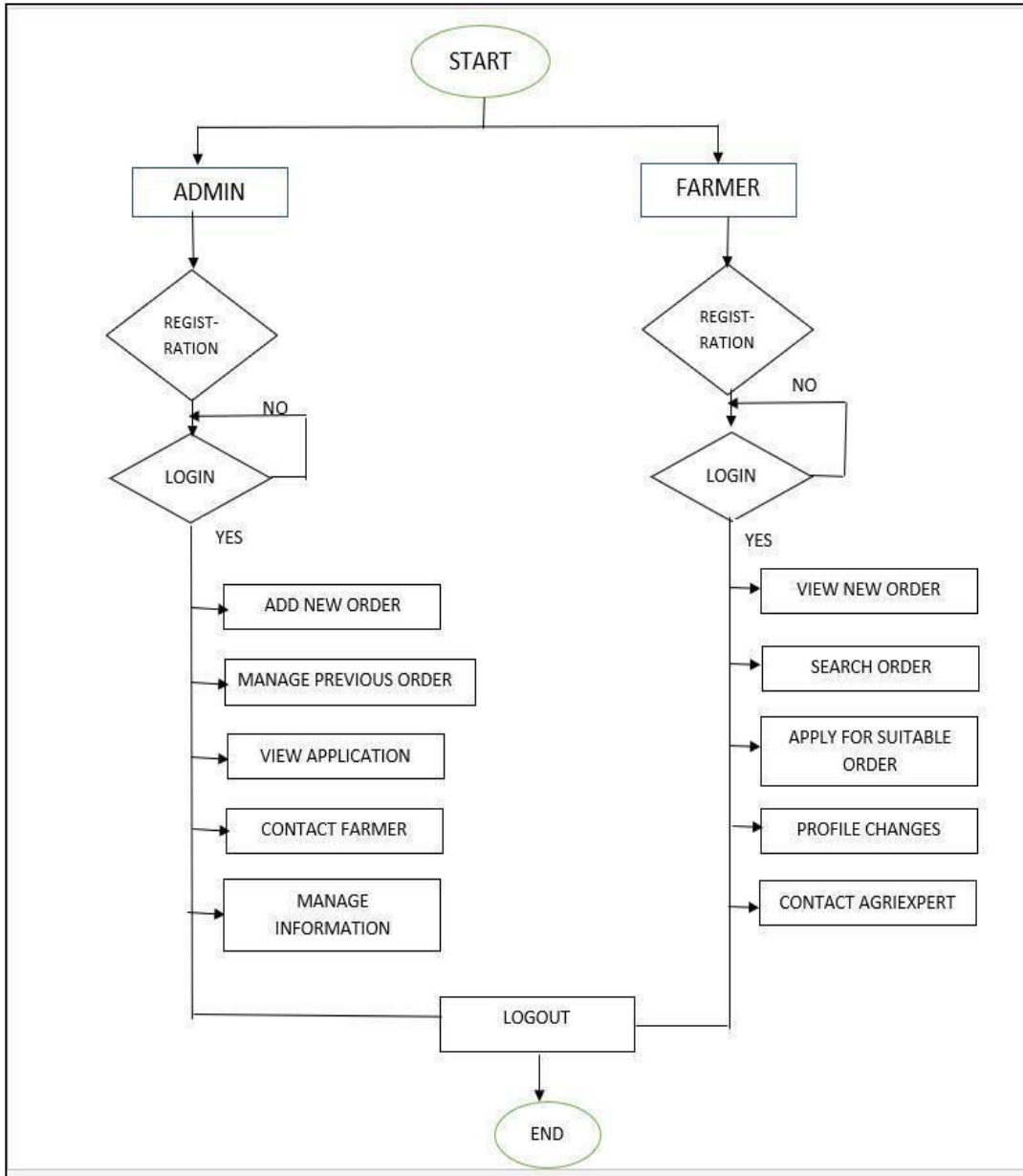
IV. RESULT

Farmer'sside:
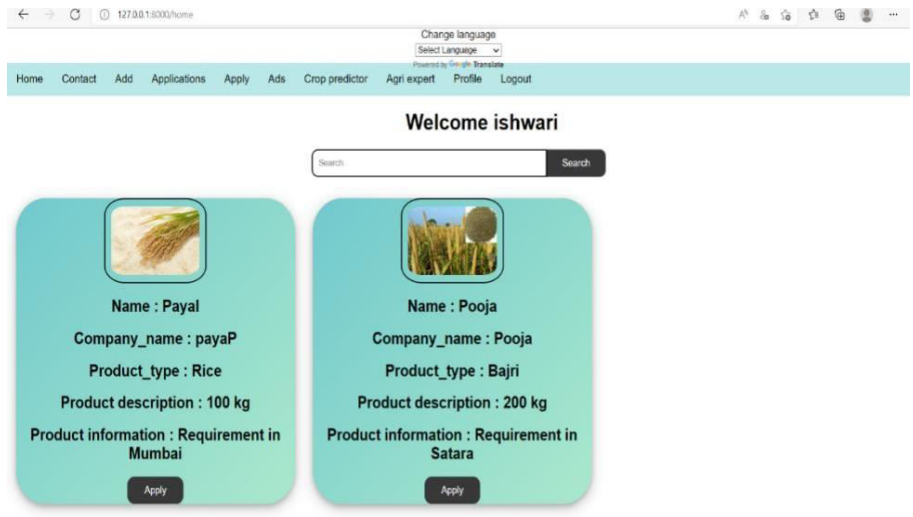

This is the firstpage where afarmer has toregister or login asfarmer

REGISTRATION PAGE
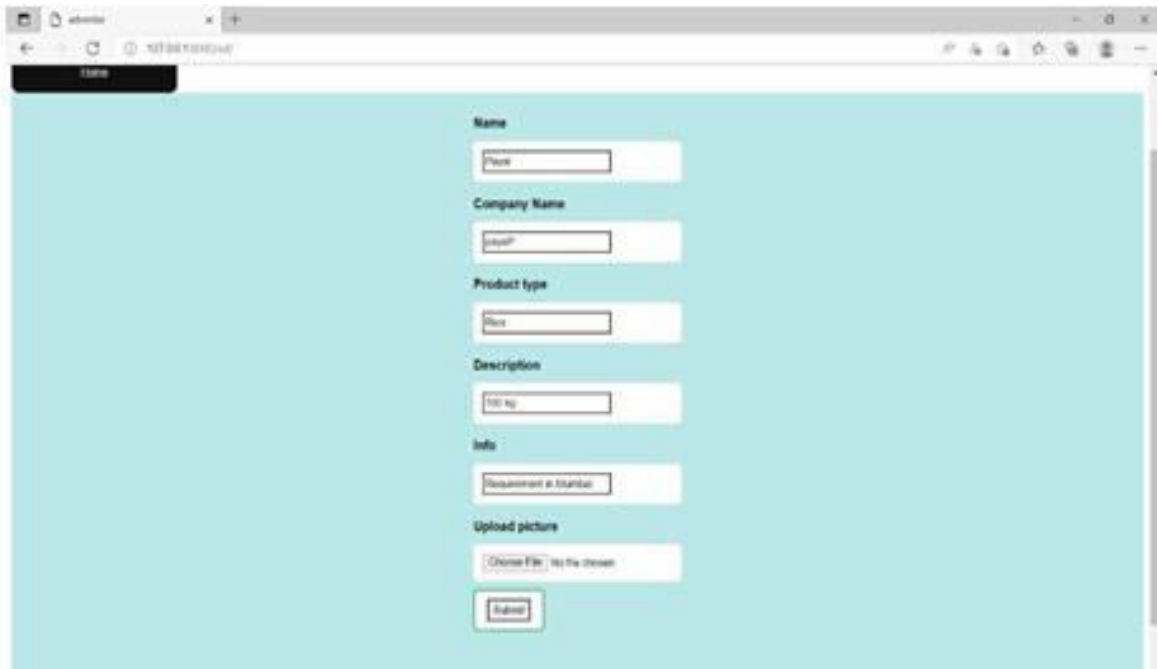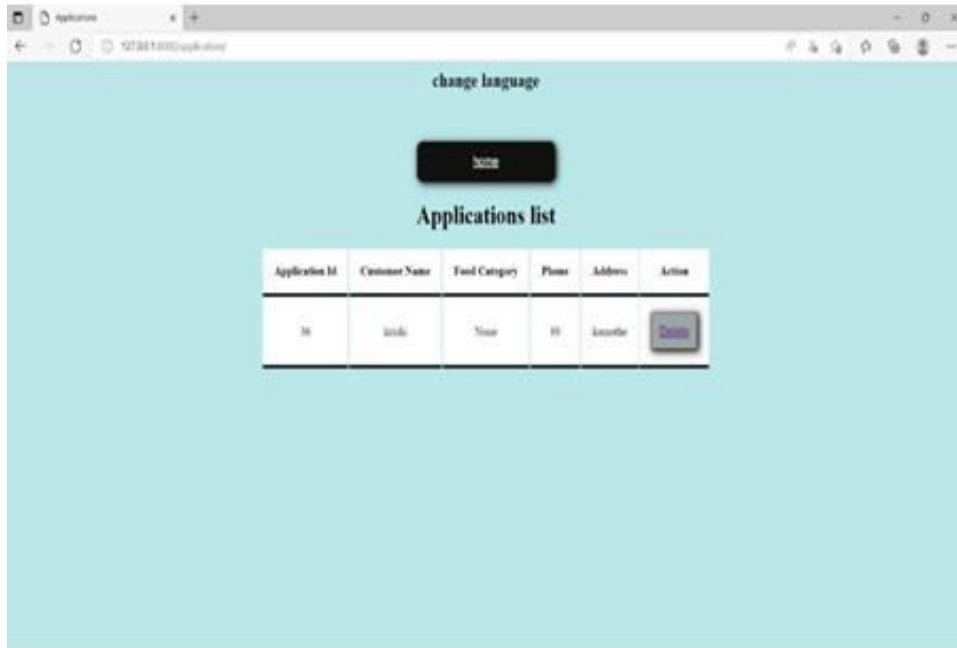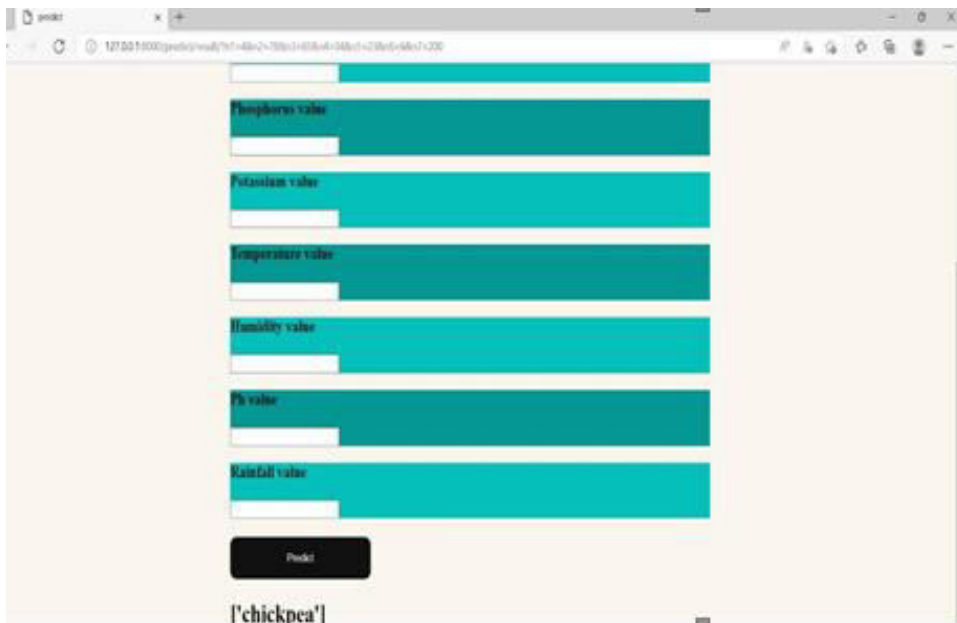
Display of Adds

Posting Requirement from Retailer Side:

Viewing Application From Farmers

Crop Predictor Feature

V. CONCLUSION AND FUTURE WORK

CONCLUSION:

There is no doubt that in marketing/business there is a motive of profit involved and at the same time marketing is base on certain values, principles and philosophies such as offering just and fair prices to farmers which will work hard to provide us food. Bringing digitalization will give farmers to get in touch with the best retailers with just few clicks. Through this platform we will make sure that is profitable to both the farmers and

retailers. Since agriculture is backbone of our nation , it is our responsibility to keep it as the same for a lot more generations to come . This platform will encourage the farmers to continue farming and make sure they get the right fruit for their labor . And lead our country towards digitalization.

FUTURE WORK:

- Middlemen problem is very crucial problem now a day.so to break this chain of middlemen this app will help.

- Using this app buyer can find particular products and they can directly buy that products from farmers. This will beneficial to both buyer & producer. So it will save efforts and time .

- This system will suggest the best suitable crop for particular land based on content and weather parameters. And also, the system provides information about the required content and quantity of fertilizers, required seeds for cultivation. Hence by utilizing this system farmers can cultivate a new variety of crop, may increase in profit margin and can avoid soil pollution.

- It is used by all over India's farmer and the basic advantages are it is feasible in all languages for farmers. Easy to switch between your comfortable language

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