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A Review On Mobile Application As A Farmer's Companion

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Abstract

This proposal helps farmers to rent modern machineries and equipment for agriculture and can also rent a place for storing crop fields as per their requirements. The app can also be linked to the government server to track the record of the crops to the fertilizers they used, the government aided funds etc. For which we need to maintain a database for machineries and equipment availability data. And details of availability of space for storing crops.

The app will be made available in speech to text and in the regional language which makes it easy for the farmers to access it.

I. Introduction

The history of agriculture dates back thousands of years, and its development has been driven and defined by greatly different climates, cultures, and technologies. Modern agronomy, plants breeding, agrochemicals such as pesticides and fertilizers, and technological developments have in many cases sharply increased yields from cultivation. Mechanized agriculture is the process of using agriculture machinery to mechanize the work of agriculture, greatly increasing farm worker productivity in modern times, and powered machinery has replaced many farm jobs formerly carried out by manual labor or by working animals such as oxen, horses and mules which were time consuming and long process. So we use modern machineries to reduce manual power and to increase productivity. In order to help farmers by providing those modern machineries for rent and place for storing filed crops as per their needs.

II. Proposed system

Our plan is to provide farmers modern machineries and equipments. Providing machines through easy steps by developing an application. The details includes availability of modern machineries and equipments, rent rate for each machineries. The application is easy to access, available in speech to text and in regional languages. This app also be linked to the government server to track the record of crops to the fertilizers used.

III. Uses of tractor in agriculture

Mechanization saves time in completing different operations, which gives the crop more time to mature. Tractors are being used for tillage on about 22.78% of total land area and sowing about 21.30% of total area. The productivity of major crops is higher on tractor owing farms due to timely and sufficient availability of tractor services and 61.67% of large farmers and 11.67% of medium farmers own tractors.

IV. Machineries for rent

Tractor, Sprayer, field cultivator, shredders and cutters, seeders and planters, wheel tractor scrapper, plough, baler which are shown in figure 1.

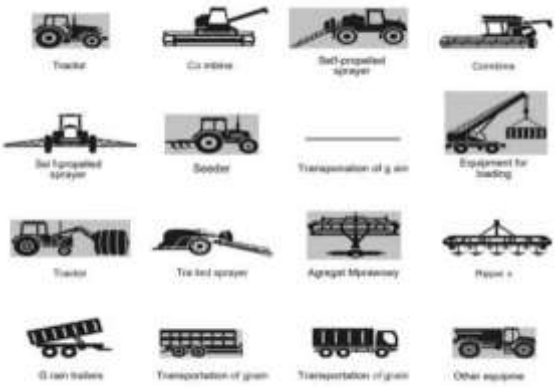

Fig 1. Machineries for farmers

Machineries:

➢ for soil cultivation

➢ for planting

➢ for fertilizing pest control and

➢ for irrigation

Steps for Creating an Agriculture App

➢GPS and location-based services.

➢Chat.

➢Broadcasting and video calls.

➢Camera and machine vision.

➢Calendar.

➢Push notifications.

➢Weather forecast.

1. GPS and location-based services

It's hard to imagine an agriculture app for farmers without a map. Mapping allows farmers to use lots of location-based features, including tracking drone investigations and seeing local weather forecasts. A location-based service can also help to divide a field into polygons to investigate each one separately and to pin locations that need extra attention. With maps, farmers can also locate their specialty crops, pesticide applicators, and so on.

2. Chat

As agricultural technologies become more and more complex, some farmers need advice when transitioning to more digital-oriented farming and trying out new technologies. This is what makes chat in farming mobile apps popular.

3. Broadcasting and video calls

Video streaming and broadcasting are also great features for an advisor app. They allow advisors to answer common questions and allow farmers to join live video sessions. Broadcasting also helps farmers share their experience and useful tips, creating a community inside your application.

4. Camera and machine vision

Some agriculture applications are centered around visual information and machine learning, which allows farmers to effectively recognize plant diseases at early stages, identify weeds, check nitrogen levels, and evaluate leaf damage. There are lots of open source libraries for machine vision – get help from professional developers to find out a perfect one for yourself.

5. Calendar

A calendar is important if you're creating a mobile app for managing crops. A calendar helps farmers schedule all their activities. A farmer can share a calendar with workers to keep processes neat and organized.

6. Push notifications

Push notifications are a must for any mobile application. They help farmers keep track of different activities they need to pay attention to, warn about any changes, emergencies, and new data, and remind about events planned in the calendar. If you want to give even more information in your reminders, you can use rich push notifications including pictures and even maps.

7. Weather forecast

Though technology has made farmers less dependent on the environment, weather is still an important factor when it comes to growing crops. Weather forecast integration is a useful feature for an agriculture app. The key here is precise information that's constantly refreshed: every hour at least.

We are using python to develop an application

Python: Python is a general purpose coding language .Its syntax is easy and code is very readable. Python allows you to write programs in fewer lines of code than most of the programming languages. So we are using "artificial intelligence" in mobile applications for image recognition system and voice recognition system.

V. CONCLUSION

Our proposal imposes about a mobile application which will be a farmer's companion. It helps farmers by providing those modern types of machinery for rent and places for storing field crops as per their needs. It also comes with so many specifications such as GPS and location-based services, Weather forecast, Chat, etc for better assistance. The application's vision is, to gather all the existing technology available and make it a chat away or a call away distance while also bringing up a digital revolution in the agriculture industry.

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