

Social Media Application for Farmers – A Survey

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Abstract - In India, the gap between the rural sector and digitalization is increasing day by day. As the technology progresses in education, business, tourism the main economical sector of India the agricultural sector has scarcity of technology. Lack of connectivity, no centralized system and irregularity between the planning and action of the agricultural sector has drifted the agricultural sector behind. As the nation keeps progressing there should be an introduction of an application that connects the root level food producers.

This application will help them to connect with one of their kind, get to know about various facilities provided to them and progress further in their business. Social Media application is proved to be a revolution for the Internet. Like Yahoo, Facebook and other social media application that connects users. It not only helps users to be in contact with each other but more important things like News, Trends are reached to user with lightning speed unlike Televisions, Radio with stream the news and other important information on a schedule. It is observed that around 60% of the food producers use smartphone and 50% of them use social media applications like Facebook, YouTube etc. Developing a social media application that will connect them, provide them information, and features like crop price prediction, daily price will help them for their business.

Key Words: Social Media, Farmers, Application, Crop sources, Price Prediction. Survey

1. INTRODUCTION

Social Media application has proved to be a revolution among its users. Any news and information reach the user at lightning speed. Users can talk freely, share their views, know about others and form their own mindset. Unlike the classical information channel like television, radio which provides only one way communication. Social media provides two way communication in which the user can share his/her views freely. In the first decade of the internet social media websites and application were made available to any type of people. But as the technology kept on progressing more focused social media application came into existence like LinkedIn for Professional Careers, Reddit for Community based groups and much more. These focused applications proved to be more useful to the targeted people because their features were very useful for the users. Many users of LinkedIn can find jobs easily by connecting to the recruiters because it was the basic idea on which LinkedIn was made. Traditionally you would have to find a job posting on newspaper or via internet websites, find the recruiter's email and mail your

resume. But LinkedIn has revolutionized this traditional job finding system with more easy and one click system.

Similarly, after researching it came into light that the Government of India provides many facilities, schemes to its primary sector: Agriculture Sector.[1] But the reach of these schemes, is far less because of traditional one-way communication. Via Radio, News, or poster. After researching further, it was known that around 60% [2] of the farmers have access to mobile and internet. These include not only the farmers but the people in their household. Looking into this matter, the idea of developing a social media application for farmers where not only the government will share the schemes but farmers too. With this application the agricultural sector [3] will be revolutionized as no such application exist. Along with adding friends, and chatting other features will also be made available so that the users can make use of these features for their work.

2. PROBLEM STATEMENT

With the increased users of the internet in rural India, there exist no single application where farmers can connect with each other, and get various data like weather, prices, market and so on. The users depend on typical social media applications like Facebook, YouTube to get the daily information which in turn depends on the same news sources.

Rural Areas Smartphone Usage 2019

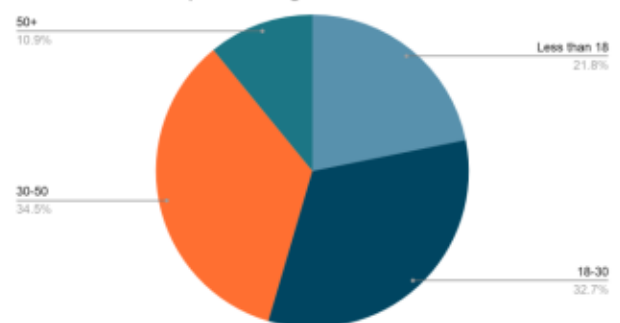


Chart -1: Smartphone usage in rural India

The above figure shows the usage of smartphones In Rural areas on which it can be concluded that the farmers have a channel of communication but aren't able to utilize it completely for their own benefits. We need to design and develop an application that fulfils all the digital needs of the farmer. The application should be simple and multilingual. The features of the application should be implemented

thoroughly such that the user understands the feature and doesn't find it difficult.

3. LITERATURE SURVEY

A few almost similar applications have been studied thoroughly. They are as follows.

I. Kisan Suvidha Application

Source: Google Play[4]

Developer: Department of Agriculture and Cooperation, Ministry of Agriculture and Farmers Welfare

Rating: 3.6

Features:

1. Information – Weather, Market Price, Advisors etc.
2. Schemes - Government related schemes.
3. Others – Soil Health Card, Crop Insurance etc.

Limitations:

1. Slow Application
2. Most information not available
3. Application crash reports.
4. No updates

II. IFFCO Kisan App

Source: Google Play [5]

Developer:

Rating: 3.4

Features:

1. Weather forecast.
2. Market Price.
3. Agriculture advisors.
4. Advisors.

Limitations:

1. Problems faced while registration.
2. Doesn't show buyers and sellers location.

III. Agri App : Smart Farming App for Indian

Source: Google Play [6]

Developer: AgriApp

Reason: Weather forecast system in applications can be

Rating: 4.0

Features:

1. Chat with crop expert.
2. Buy sell.
3. Other Technical Glitches
3. Crop Calendar and informational video.

Limitations:

1. Videos do not stream.
2. OTP registration issues.

4. LITERATURE SURVEY CONCLUSION

It is observed that every application depends on administration for releasing information. If in case the admin of the application fails to update, the application crashes. The above application is one to one which means that you can only read information but cannot share anything. Therefore, it is the need of an hour that such a centralized application be made which will not only provide the information but also allow the users to connect and share. Such an application will make the agricultural sector more revolutionized because important information like weather, crop prices will be made available to the users.

5. PROPOSED SOLUTION

Farmos is a social media application. As the name suggest it is the social media application mainly for farmers where farmers can create their accounts, make new friends, chat with them and share post on their timeline. This social media application is made available to all but majorly focuses on features which will be impactful in day to day lives of the primary food producer. The needs of the farmers for their work such as accurate weather forecasting, getting various schemes and plans by the government, knowing about crop calendar and crop prices will be taken into account while developing this application.

Also as we know that the Indian culture is diverse hence the application will be made available in various languages for convenience of the user. The user can change the language and use it on daily basis. This application will revolutionize the agricultural sector. This application will focus on overcoming technical glitches in the existing applications and add new features. Since the existing application are deployed on the typical client server

architecture, we will try to deploy on cloud based architecture platforms for faster speed and more power.

6. OBJECTIVE OF THE PROPOSED SOLUTION

The objective of the application is to overcome various drawbacks in the existing applications.

I. Slow Process

Reason: Due to heavy traffic and low server configurations, the speed at which the data is rendered to application is slow.

Solution: The solution is to deploy the business logic of the application on faster cloud based PaaS platforms.[7]

2. Inaccurate Weather Forecast

Reason: Weather forecast system in applications can be inaccurate because the data is not constantly updated.

Solution: The solution is the constantly update weather information with API[8]

3. Other Technical Glitches

Reason: The application was not thoroughly planned and developed.

Solution: Planning and developing robust application with constant updates to remove less glitches in the application.

7. FEATURES

Following are the features of the proposed solution.

A. User Registration and Sign In

The user will be able to register into its account without any difficulty. The registration details should not create an issue while signing up for the social media. The user will be able to log in with either email or phone number provided. The user will be able to make changes into the profile whenever and wherever. The user will be able to delete the account.

B. Create/View Post

Creating a text based post or picture and text based post and posting it into the feed. Also the user will be able to view other user's post without any difficulty. The user will be provided with two choices for the post upvote or downvote the post.

C. Add and Chat with Friends

The user can search for other users and add them as friends. The friends list will appear on the profile and user can chat with them via internet.

D. Weather Forecast

WeatherAPI is used for weather forecast. This API takes the location of the user and then provides accurate weather information. This information is constantly being updated by the API services and hence user can get weather information on his fingertips.

E. Daily Market Price

The application will share daily market price to the user from which user can know about the current price the market is offering for the crop yield. This data is available on the government[9] website and we only have to render it to the user screen.

F. Crop Calendar

For the young farmers this feature will be impactful as it will show information about planting, watering and harvesting crops. The user can set reminders from here.

G. Crop Price Prediction

This feature will be the most useful as from here the user can predict the price of the crops for 1 week. With this crop price prediction the user can have a small idea whether the price will increase or decrease in the market and sell the crops accordingly. Various data of the previous crops will be taken into account and using previous research on similar topic[10] a good crop price algorithm with high efficiency and low error% should be designed. This feature will use various machine learning algorithms like KNN, Random forest and the most accurate algorithm will be used in the system. The data for the module is available on Kaggle[11] and other government websites.

8. SOCIAL IMPACT

The impact of this application will be quite useful for both user and government. The user will be able to connect with his own kind. The government will be able to know about users and plan the schemes based on their needs.

For Young Users(18-35):

Social Media application starts from the young dynamic users. They belong in the age group 18-30. These users try various application and if the app is useful they use it fully for the convenience. This application will target this age group mostly because the youth will be the one leading the future India and these young user will further take the trend into the Other Age groups.

For Middle Age group users (35-55):

These type of users are one who are slowly approaching the new technology. This application with its multilingual

feature will make sure that for any age group the application will be as useful as possible.

9. CONCLUSIONS

Farmos Application makes sure that no farmer is left out on the onboarding of technological revolution. This application solely focuses on the well being and profiting the primary food producer of India. Farmos along with its feature will be proven quite useful for the rural as well as urban India.

A good initiative started by the Farmos can only be successful if it proves helpful for the farmers. To make it more helpful constant updates, making the application more interactive, and making the features less complex will add to the user satisfaction.

This application will only focus on creating a centralized place for farmers where they can get whatever help they want without any long process.

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