

# AI Solution For Farmers

Battula Gurappa<sup>1</sup>, Manthuri Vyshnavi<sup>2</sup>, Asha Latha D R<sup>3</sup>, Lavanuru Jagadeeshwara Reddy<sup>4</sup>,

<sup>1 to 4</sup> School of Computer Science Engineering & Information Science, Presidency University, Itgalpura, Yelahanka, Bengaluru, India

**Abstract** - The Abstract is an innovative digital platform with the objective of transforming the agricultural sector by offering a user-friendly and effective solution for farmers to easily access and rent farming machinery. Given the growing complexity and cost associated with owning and maintaining agricultural equipment, this application serves as a bridge between farmers seeking machinery and equipment owners eager to optimize the utilization of their assets. The platform facilitates the connection between farmers and nearby equipment owners, enabling them to establish rental rates and efficiently manage bookings. Consequently, this maximizes the use of machinery, creating additional revenue streams for both parties involved. In order to enhance the conservation and development of agricultural wetlands, it is imperative to implement a comprehensive set of positive measures. Sustainable tourism in agricultural wetlands, when appropriately overseen and developed, plays a crucial role in safeguarding wetlands and providing support to individuals engaged in activities in and around these areas, fostering job creation and increased incomes. The system will engage with farmers for field visits, providing users with valuable insights into crop science.

**Keywords** - Mobile application, Android.

## I. INTRODUCTION

Introducing an adaptable solution aimed at streamlining and enhancing the efficiency of the agricultural rental system, this innovative mobile application seeks to bridge the gap between farmers seeking agricultural machinery, equipment, and tools, and those willing to rent out their products. In today's agricultural landscape, where efficiency and cost-effectiveness are crucial, having the right farm equipment at the right time can be a game-changer. However, the conventional method of renting field equipment often involves time-consuming phone calls, intricate communications, and limited choices.

The farm equipment rental app strives to transform this experience by providing a straightforward and efficient platform that seamlessly connects farmers with equipment owners. Offering a diverse array of quality machinery and equipment for rent, ranging from tractors and harvesters to irrigation systems and specialized tools, the app caters to a broad spectrum of farming needs. Users can effortlessly explore available options, compare specifications, and select the machine that best suits their requirements.

The system is designed to reach out to farmers for field visits, providing users with valuable insights into crop science, rural culture, and overcoming obstacles such as the lack of tourists, tangible infrastructure, valuable agricultural products, and inadequately educated workers that hinder effective aquaculture transport development.

Crucially, the app ensures that farmers and equipment owners can confidently engage in lease agreements, with the assurance that their needs and interests are safeguarded. The incorporation of payment mechanisms for farms utilizing technology and communication capabilities further elevates the overall user experience.

## II. LITERATURE SURVEY

\*\*1. AGRARYANS: Agricultural Machinery Rental System by CHELLA ASHOK KUMAR, Dr. M. SARAVANAMUTHU (2022)\*\*

This paper focuses on benefiting farmers through the management of various agricultural machinery, such as Harvesters, JCBs, Tractors, Pickups, Rotors, and others. The primary objective of the website is to simplify the process for end users, allowing vendors and farmers to easily update their information online.

\*\*2. Agritourism: Exploring the Work of Karthik Dharamkar and Palve Gajanand\*\*

Agritourism has emerged as a valuable source of additional income for farms, contributing to overall profitability by involving farm products and activities. Urban populations are increasingly turning to agri-tourism as a means of escaping the routine of big cities, making it a dynamic and growing market in our country.

\*\*3. Agro-tourism in Wetlands: Insights from Yan Liu and Min Zhou\*\*

Effective development of agro-tourism in wetlands faces barriers such as insufficient capacity for receiving tourists, limited product processing, a lack of valuable farm commodities, and a shortage of well-educated practitioners. Overcoming these obstacles requires government planning, accessible facilities, take-away commodities, and the cultivation of professional practitioners, aligning with the characteristics of agricultural wetlands.

\*\*4. Local Environmental Impact of Wood Combustion in Agro-tourism Structures by Lucian Ionel Cioca et al. (2017)\*\*

Technological solutions that ensure a proper combustion process, along with the correct utilization and maintenance of the entire system, play a crucial role in minimizing emissions' risks and enhancing energy efficiency. Attention to the entire process is vital for improving the overall environmental impact of wood combustion in agro-tourism structures.

**\*\*5. Agro-Tourism in 2022: Insights from Chandra Shekhar\*\***

Agrotourism serves as an economic strategy, aiding villagers in establishing alternative income sources while preserving their cultures. It integrates agricultural and touristic activities, acknowledged for its benefits by both urban and rural communities. However, development challenges exist, and government support is essential for overcoming these obstacles and fostering the growth of agro-tourism centers.

**\*\*6. Web-Based Agricultural Equipment Rental System by M Nagendra Raju, Dr T Mani Kumar, Dr N Naveen Kumar (2022)\*\***

This paper offers support to farmers through a website designed to manage various agricultural machinery, making it user-friendly for end users. The platform allows sellers and farmers to easily update their previous information, enhancing the efficiency of the agricultural equipment rental process.

### III. METHODOLOGY

#### Proposed System :

The envisioned mobile application aims to streamline the process of connecting farmers with service and machine providers available for rent. Developed using Kotlin in Android Studios, this app empowers farmers to register and access information about available service providers and rental machines. It allows them to review their rental history and choose the most suitable option for their specific needs. Machine providers can add their vehicles, review booking requests, and respond accordingly. Similarly, service providers can view requests and update their responses through the app. An admin panel will be included for adding service and machine providers, as well as accessing user information.

This robust app facilitates farmers in seamlessly accessing the services essential for their daily operations, while service and machine providers can effortlessly expand their clientele and offer their services. In the proposed system, users will register and access information about farmers' crops, including details about the farmer. They can also book slots to spend time with the farmer by providing specific details such as the date, number of persons, and duration of days. The farmer can then review these details and either accept or reject the booking based on their preferences.

#### Existing System:

The current system poses considerable challenges for farmers who lack their own machinery, as accessing necessary equipment becomes a daunting task. Such farmers often have to depend on personal connections or local rental services, which are typically limited in terms of both availability and variety. For those without personal machinery, the financial burden associated with owning and maintaining farming equipment is substantial, particularly for smaller-scale or resource-constrained operations. Acquiring new machinery comes with significant upfront costs, and the ongoing expenses related to maintenance and repairs can be financially straining over time.

In the present scenario, there is a widespread lack of knowledge regarding the science of crops among people, contributing to a decline in farming growth. The existing system also requires users to manually search for details about crops and their respective locations, which may not be feasible for every user.

## IV. IMPLEMENTATION AND RESULTS

**Admin:** He will login with his email and password. He can add the farmers and view farmers. He can add the service provider and machines provider and view user, services provider, machines provider.

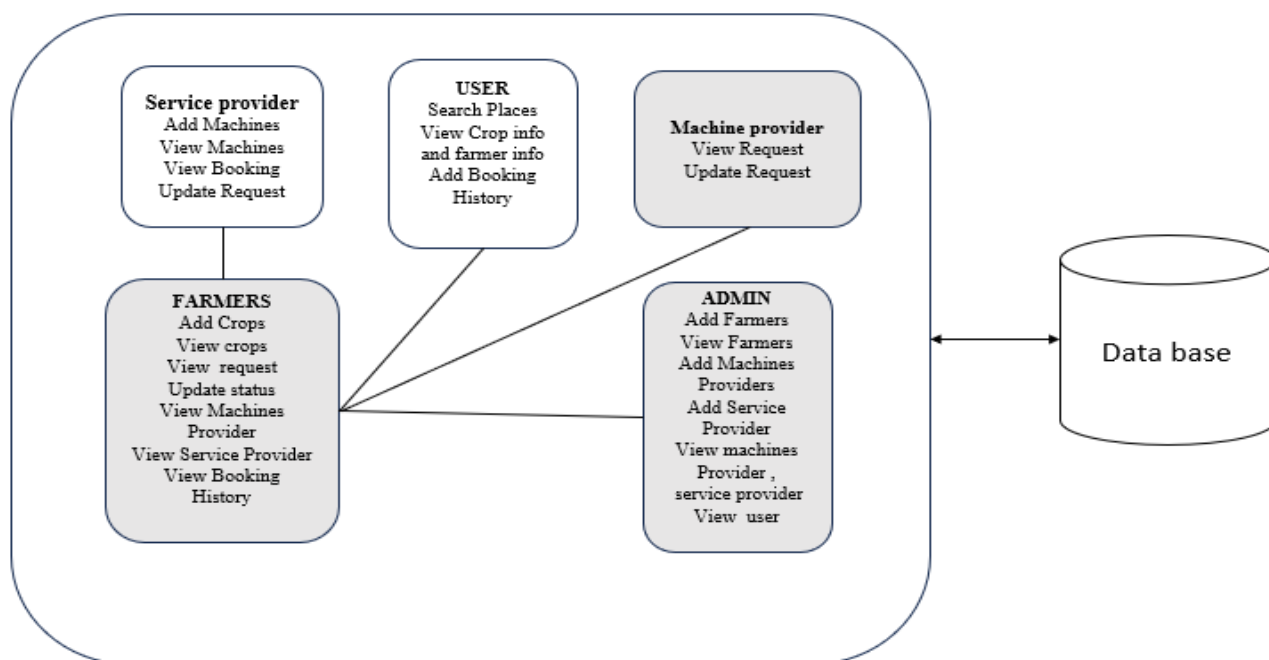
**Farmer:** He will login with email and password. He will add the crop information and view the tourism people. He can view history of the crop information also. The view service provider and view machines provider and add bookings, view history.

**Machines provider:** He will login with his email and password. The add machines and view machines, view bookings and update the request.

**Service Providers:** He will login with his email and password. view bookings and update the request.

**User:** He will register by providing some details after that the user can login with his email and password. The user view crop information and farmer details then he can book a slot with farmers and view the status and location of that farmers.

**ARCHITECTURE :**



**V. CONCLUSIONS**

In conclusion, the introduction of this user-friendly platform for renting farming machinery not only simplifies the process but also brings numerous advantages to both farmers and equipment owners. For farmers, the app offers easy access to a diverse selection of high-quality machinery, empowering them to enhance operational efficiency and boost productivity. The platform facilitates a streamlined approach to finding and renting equipment, saving valuable time and resources compared to traditional rental methods.

As an emerging trend in the travel industry, agri-tourism presents an opportunity for visitors to engage with agriculture and gain insights into farming practices. It serves as a unique means to connect with nature, understand local cultures, and contribute to the local economy. The benefits of agri-tourism extend to both visitors and the host communities. Visitors have the chance to learn about agriculture, immerse themselves in rural life, and savor fresh, organic food. Simultaneously, local communities enjoy additional income generated from tourism, supporting and promoting their traditional farming practices.

However, it is imperative to develop and manage agri-tourism in a sustainable and responsible manner. This involves preserving natural resources, safeguarding the environment, and respecting the cultural values of local communities. Active participation of farmers and local communities in decision-making processes is crucial, ensuring that the benefits of agri-tourism are equitably shared. With its potential as a sustainable form of tourism, agri-tourism can deliver a distinctive and authentic travel experience while contributing to the well-being of local communities and preserving the natural and cultural heritage of destinations.

**VI. REFERENCES**

- Bhuvan S, Purushottam G.K, Manoj A, Chandan A.M, Chandra Prabha K.S, "Agri-Equipment's Rental System," 2019
- CHELLA ASHOK KUMAR, Dr. M.SARAVANAMUTHU, "AGRARYANS: Farm Equipment Rental System/Based on Agriculture," 2022
- Mr. Chetan Ner, Mr. Vishal Hire, Ms. Mansi Salunkhe, Ms. Sayali Patil, Mrs. Bhawana A hire, "AGRICULTURE EQUIPEMENT'S RENTAL SYSTEM," 2023
- M Nagendra Raju, Dr T Mani Kumar, Dr N Naveen Kumar, "WEB BASED FORM EQUIPMENT RENTALSYSYSTEM FOR AGRICULTURE," 2022
- R. Carelli D. Herrera and S. Tosetti, "Agriculture Autonomous Vehicle Dynamic Modeling and Identification," 2016.
- Chang-Hokang, Seung-YeoubShin, "Agricultural Machinery Rental Business Management System on the Web," 2014.
- DAVID KAHAN, FRED ZAAL, ROGER BYMOLT, "Thinking Outside the Plot: Case Studies in East Africa Provide Insights on Small-Scale Mechanization," 2017.
- Hilmi, Martin, "Agri-food value chain small-scale actors Agricultural mechanization services are available for rent," 2018.
- S.Y.Jung, "Web-based maintenance and management systems," 2011.
- Krunal Bagaitkar, Khoshant Lande, "Tractor Hiring Application for Farmers," 2018.
- MUHAMMAD AYAZ, MOHAMMAD AMMAD-UDDIN, MOHAMMAD AMMAD, "Toward Making the Fields Talk: Internet-of-Things(IoT)-BasedSmartAgriculture," 2019.
- Karthik Dharamkar,Palve Gajanand, "Agritourism," 2017
- Nicole Vaugeois,Shannon Bence,Anna Romanova, "Farm Diversification Through Agri-tourism," 2018
- Yan Liu; Min Zhou, "Agro-tourism in Wetlands," 2013
- Lucian Ionel Cioca; Ramona Giurea; Ioan Achim Moise; Ilaria Precazzini; Marco Ragazzi; Elena Cristina Rada, "Local environmental impact of wood combustion in agro-tourism structures," 2017



- Chandra Shekhar, "Agro -Tourism," 2022
- chadda.D,Bhakare.S, "Socio-economic implications of agri-tourism in India," 2011.
- Pinky,Kaur, "Prospects and Problems of Agri-Tourism in Punjab State," 2014
- Lathiras, Zopidou, Mylonakis, Tahinakis, Protogeros, Valachis, "An Evaluation of Websites Quality Factors In Agro Travel And Ecotourism," 2010.
- R. Giurea, M. Ioan, M. Ragazzi and L. I. Cioca, "Focusing agro-tourism structures for environmental optimization," 2017.
- R. Giurea, M. Ragazzi, M., M. V. Zebres and M. I. Achim, "Is agrotourism eco-friendly?", 2017.

