RENT4FARM – A PLATFORM FOR RENTING FARM EQUIPMENTS

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Abstract‒   India is an Agriculture based country and over 50% of India's population is engaged in agriculture. Since some farming equipment is expensive, not everyone is capable of owning them. We come up with a platform through which farmers can generate passive income. Rent4Farm is a platform for farmers to lend and borrow equipment and items. Farmers can exhibit their unused equipment using our map. Communicate with borrower's and lander's using inbuilt chat.

1. INTRODUCTION

At present, farmers need to travel to a place to borrow all the essential needs, which is tiresome and not a cost effective work. So smart digital farming is listed as the highest ranking technology opportunity in the latest Global Opportunity report in terms of its expected positive impact on society. This web based project is on digitizing the process of renting the agricultural equipments by the farmers .We aim at developing an application that farmers can use to get their equipment on rent and also check the availability and renting .We also allow them to book the equipment's in advance .It also helps us to get the track of equipments that are on rent .We also aim at developing analytic for the state heads to make better availability of equipments and to keep track of the equipment's as well, which could help in providing better support for farmers.

2. LITERATURE SURVEY

Sr. No.	Year	Title	Conclusion
1	2022	Farming Guru: - Machine Learning Based Innovation for Smart Farming	This paper describes an app "Farming guru"" which will help farmers in effective farming, by making them smarter. The current paper anticipates a model and system design to not only analyse crops and weather but also help the farmers in managing finances by providing an opportunity to trade their tools for extra income as well as manage their income by providing a budget calculator.
2	2019	Smart Farming Education Service based on u-	Smart farming education service focuses on the dissemination of farming information. This farming information is supposed from current activities, farming products and from the experience of

		learning environment	farmers on the field. If the information is not available, or if available and not in a form that is amenable to being brought to the end producer then the process stalls at this point.
3	2020	Intelligent Farming using Delta Robot	In this paper, Machine Learning technique is used to train the drone for decision making and to spray the pesticides automatically. Finally the harvested vegetables and fruits are freshly packed with the help of delta robots and robotic arms. This prevents processing stage and adulteration, thus it retains 100% of nutrition. This method will revolutionize the impact of organic farming in the future.
4	2022	An Analytical Study of the Types of Implements used by Farmers in Mechanised Agriculture	In this paper, the mechanization of agriculture is defined in various ways. This involves the use of tools, implementations, and powered machines in agricultural operations. Mechanical power, draught animal power, and human power are the three basic energy sources in agricultural mechanization.

3. DESIGN SYSTEM

3.1BLOCK DIAGRAM
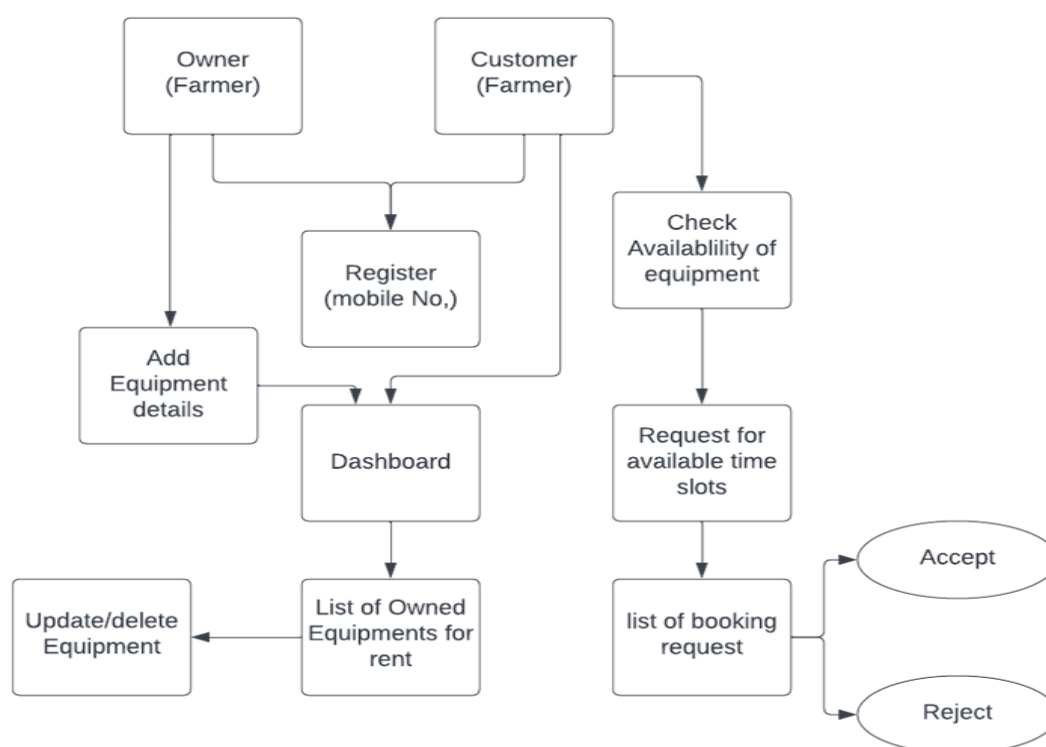
Once the Web application is complete it will function in the following way:

Farmers create a profile using Mobile No. They can register as Owner or a rental account.The owner can add equipment along with the description, details, and available time.

Framers can browse, filter, and send requests, for the available time slot. Farmers can communicate

using in build chat and calling ,with owner for any booking discussions the owners booking discussions. At a given time, farmer equipment is idle during non-seasons. A platform that allows farmers to rent farming equipment for less during the off-season. A simple aggregation platform with call centre support can function as booking equipment will help farmers make additional income. We aim at developing an application that farmers can use to get their equipment on rent and also check the availability .

- It reduces the cost of visiting the nodal centres to check the availability and renting.

- We also allow them to book the equipment in advance.

- It also helps us to get the track of equipments that are on rent

- We also aim at developing analytic for the state heads to make better availability of equipments and to keep track of the equipment's as well which could help in providing better support for farmers

4. COMPONENTS LIST AND SPECIFICATION.

Hardware Requirement –

- ☒ Ram: 8GB or above
- ☒ Wireless communication technology: Wi-Fi, Internet

Software Requirement –

- ☒ OS: Any OS
- ☒ Browser: Any latest version of browser
- ☒ Frontend: React, Redux
- ☒ Backend: Django, Django Rest Framework
- ☒ IDE: VS Code, PyCharm
- ☒ Version Control: Git and GitHub
- ☒ Machine Learning: Python, Jupyter Notebook
- ☒ Database: PostgreSQL

5. RESULT AND CONCLUSION

We are proposing a platform for easy borrowing and lending of farming equipment using Django as backend framework and react as frontend framework and using machine Learning methods for advanced searching and recommendation of tools. This platform will prove to be profitable for farmers as it provides a passive earning method to the owners of the equipment.

6. FUTURE SCOPE

Functionality for selling and buying of old farming equipment will be added. Future scope will include content of websites in other regional languages like marathi, hindi and Gujrathi. There are a lot more challenges in the farming industry starting with labour requirements which will be covered.

7. REFERENCES

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