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'E-Agriculture'

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ABSTRACT: Technology has made inroads into almost all spheres of life, but sadly, India's vast agricultural sector has a severe lack of it. Despite rural India being predominantly agrarian, less than 30% of our farmers use the necessary equipment that facilitates productive and profitable work. Nowadays there are many online services which are on trend that give much benefit to user. This application named as farming tools hiring application for farmers is a rental service in which the farmer arrives to request a hire of a rental unit. It is more convenient than carrying the cost of owning and maintaining the unit. There are several problems occur on farmer like they are not able to hire a equipment of agriculture for farming in nominal amount or they do not find tools easily. In another case, sometimes farmers are unaware about the price of the agricultural equipment; such that farming tool owner misguide the farmers very easily and cheat them by taking extra money. The solution for solving such various problems occur on farmers regarding to agriculture can be overcome using this android application. This android application is an application that is accessed over a network such as internet or intranet. Therefore with this new method the process will be more efficient and safety of hiring equipment is secure. It is also the best way to increase the quality of agriculture management, productivity and can reduce the time constraints for farmers.

I. INTRODUCTION

In this mobile application, farmer will hire farming tools based on their needs and other mechanization at a normal price. In this application, we will choose for the demand of farmer based on his demand we will recommend hire tools. In this, we will use pin code to locate nearby tools based on farmers requirements. This application will provide full detail about the tools so that the farmer can choose a type of tools he need based on his requirements and can easily get familiar with it. To register the farmer, only mobile no and name will be required, after a successful registration the farmer will receive a pin for future use. In this android application farmer just need to register himself and then he'll be able to book tool at the appropriate price. User only need to select the number of hours for renting, the application will automatically calculate the renting price according to the total time selected by the farmer.

II. RELATED WORK

*KNN ALGORITHM

The KNN (k-Nearest Neighbors) algorithm is a simple yet effective supervised learning algorithm used for both classification and regression tasks. It operates on the principle of similarity, where it predicts the label or value of a new data point based on the labels or values of its nearest neighbors in the training dataset.

Here's a step-by-step overview of how the KNN algorithm works:

1. Training Phase:

- Collect a labeled training dataset, where each instance consists of input features and the corresponding class label or target value.

- During training, KNN simply memorizes the training instances and their associated labels or values. No explicit model training is performed.

2. Prediction Phase:

- Given a new, unseen data point with input features, KNN identifies the k nearest neighbors to that point in the training dataset based on a distance metric, commonly Euclidean distance or Manhattan distance.

- The value of k is a user-defined parameter that determines the number of neighbors to consider. Typically, it is an odd number to avoid ties in voting.

- For classification tasks, KNN assigns the majority class label among the k nearest neighbors to the new data point. This is known as majority voting.



•For regression tasks, KNN calculates the average or weighted average of the target values of the k nearest neighbors to predict the value for the new data point.

Key considerations for KNN include selecting an appropriate value for k, choosing an appropriate distance metric that suits the data, and handling the scale of features (normalization or standardization may be needed).

KNN has several advantages, such as its simplicity, ability to handle nonlinear data, and flexibility in various problem domains. However, it can be computationally expensive during prediction, especially with large datasets, as it requires calculating distances to all training instances. It is also sensitive to the choice of k and the characteristics of the training data.

KNN is commonly used in recommendation systems, anomaly detection, and pattern recognition tasks. It is particularly effective when the decision boundaries are nonlinear or when no explicit model assumption is desired(Reference paper.1)

III. METHODOLOGY

MAIN FOUR MODULES

1.Login Module :

This module is responsible for the login purpose. In this module, the user will first have to enter mobile number so that an OTP can be generated. After getting the OTP, user will have to enter it correctly. If user is logging for the first time then the Registration page will be displayed in which the user have to enter details like name and address. If already registered, then user can proceed for the further process.

2. Store List Module:

In the store list module, there are numbers of stores present in which different types of tools are available. Details like address, pin code and contact number of each store is present with the name of the store. In this module, user can select any store to hire a tool. This module contains the equipment list module.

3. Equipment List Module:

This module contains a list of equipment used for agriculture. User can select any of the equipment according to their agricultural requirement. The total number of equipment available in the store is also given in this module.

4. Booking Module:

“E- agree” The booking module is responsible for the operations like hiring the equipment. To hire a equipment, the user will have to enter the number of hours, select date and time. After entering these details user will have to confirm booking. Then the user will get the total price of the equipment and hence the booking will be confirmed successfully.

*PROPOSE SYSTEM

The solution for solving such various problems occur on farmers regarding to agriculture can be overcome using this android application. This android application is an application that is accessed over a network such as internet or intranet. Therefore with this new method the process will be more efficient and safety of hiring equipment is secure. It is also the best way to increase the quality of agriculture management, productivity and can reduce the time constraints for farmers.

*ADVANTAGES

There are various advantages of this application

- Enhance Business Processes
- Online Tools Reservation
- Availability
- Transparency
- User friendly
- Flexibility

*ANALYSIS MODELS:

SDLC MODEL TO BE APPLIED

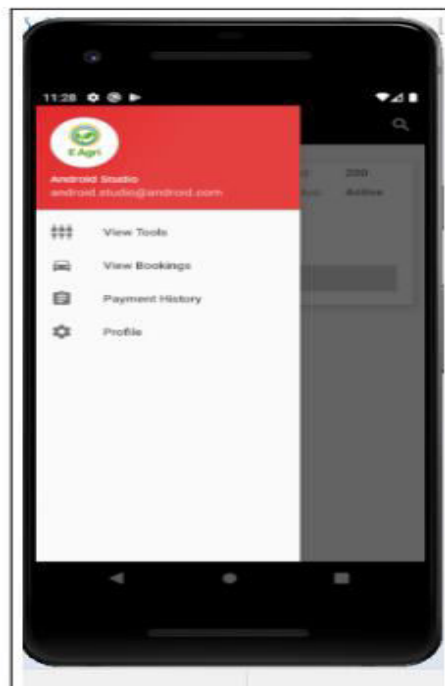
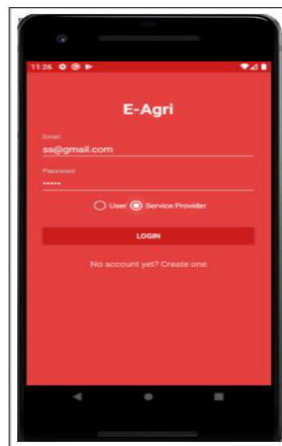
• Waterfall Model The Waterfall Model was first Process Model to be introduced. It is also referred to as a linear-sequential life cycle model. It is very simple to understand and use. In a waterfall model, each phase must be completed fully before the next phase can begin. This type of model is basically used for the project which is small and there are no uncertain requirements. At the end of each phase, a review takes place to



determine if the project is on the right path and whether or not to continue or discard the project. In this model the testing starts only after the development is complete. In waterfall model phases do not overlap.

IV. EXPERIMENTAL RESULTS

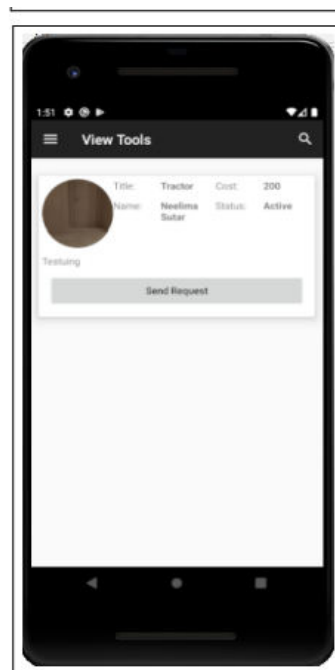
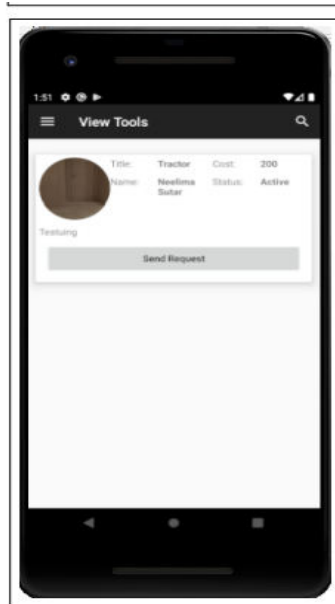
RESULTS





|| Volume 12, Issue 5, May 2023 ||

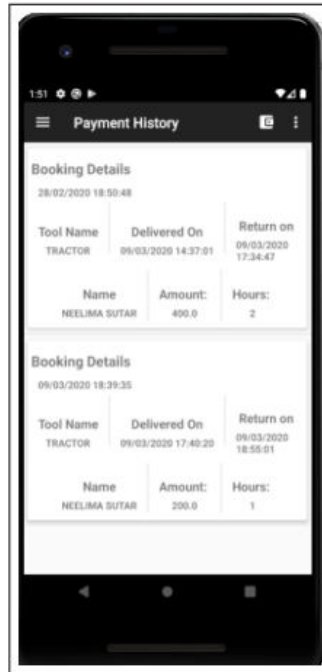
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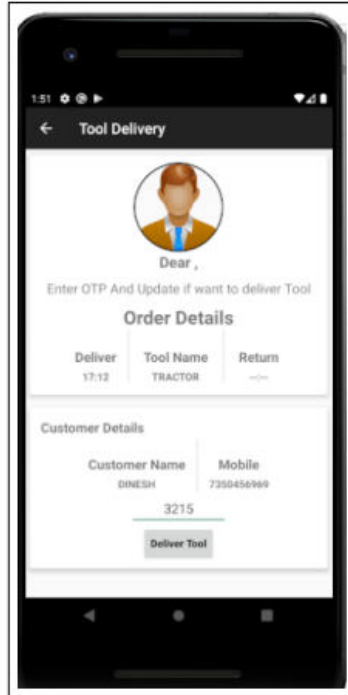




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V. CONCLUSION

Renting farming tools can provide several benefits for farmers. Here's a summary of the key advantages:

1. Cost-Effectiveness: Renting farming tools allows farmers to access and use expensive equipment without the need for a substantial upfront investment. Instead of purchasing tools outright, farmers can rent them on an as-needed basis, reducing financial burden and improving cash flow.

2. Flexibility and Adaptability: Renting provides farmers with flexibility in choosing the right tools for specific tasks or projects. They can easily switch between different types of equipment based on seasonal needs or changes in farming operations. This adaptability enables farmers to optimize their operations without being tied to the long-term ownership of equipment.

By implementing the project which is ' Tool on Rent', we conclude that the problem statement is totally being eliminated through the deployment of this project. And the objective is achieved through the android application

REFERENCES

1. SIDDHARTH NANDAKUMAR CHIKALKAR, "K -NEAREST NEIGHBORS MACHINE LEARNING ALGORITHM", 2020 IJCRT | Volume 8, Issue 12 December 2020 | ISSN: 2320-2882 PP2400-2404
2. Wei Jin, "Research on Machine Learning and Its Algorithms and Development", Journal of Physics: Conference Series 1544 (2020) 012003 IOP Publishing doi:10.1088/1742-6596/1544/1/012003
3. Tran Ngoc Viet, "THE NAÏVE BAYES ALGORITHM FOR LEARNING DATA ANALYTICS", Tran Ngoc Viet et al. / Indian Journal of Computer Science and Engineering (IJCSE), p-ISSN : 2231-3850, Vol. 12 No. 4 Jul-Aug 2021



4. FalguniGhatkar, Sakshikharche, Priyanka Doifode, JagrutiKhairnar, Prof. Neelam Kumar,” To Study Different Types of Supervised Learning Algorithm” May 2023, International Journal of Advanced Research in Science, Communication and Technology (IJARSCT), Volume 3, Issue 8, May 2023,PP-25-32
5. R. Lederman, M. Olivares, and G. Van Ryzin. Identifying competitors in markets with fixed product offerings. Working Paper, SSRN 2374497, 2014.
6. Bruno A. Neumann-Saavedra a, Patrick Vogel a, Dirk C. Mattfeld a- Anticipatory service network design of bike sharing systems- 18th Euro Working Group on Transportation, EWGT 2015, 14-16 July 2015.
7. Maurizio Bruglieria, Alberto Colornia,b, Alessandro Lua,b- The vehicle relocation problem for the one-way electric vehicle sharing: an application to the Milan case Procedia - Social and Behavioral Sciences 111 (2014) 18 27.
8. INSEAD, The business school for the world-Working Paper Series- BikeShare Systems: Accessibility and Availability- January 26, 2015
9. Florian Paul a*, Klaus Bogenberger a- Evaluation-Method for a station based Urban-Pedelec Sharing System Mobil. TUM 2014 Sustainable Mobility in Metropolitan Regions, May 19-20, 2014.
10. Vogel, P., Neumann-Saavedra, B.A., Mattfeld, D.C., 2014. A hybrid metaheuristic to solve the resource allocation problem in bike sharing systems in: Hybrid Metaheuristics. Springer, pp. 1629.
11. Schuijbroek, J., Hampshire, R., van Hoesve, W.J., 2013. Inventory rebalancing and vehicle routing in bike sharing systems.
12. W. Buell, D. Campbell, and F. Frei. How do customers respond to increased “E- agree” service quality competition. Harvard Business School Accounting & Management Unit Working Paper, (11-084):11084, 2014.
13. Correia, G.H., Antunes, A.P., 2012. Optimization approach to depot location and trip selection in one-way carsharing systems. Transportation Research Part E: Logistics and Transportation Review 48, 233247.
14. R. Nair, E. Miller-Hooks, R. C. Hampshire, and A. Buic. Large-scale vehicle sharing systems: Analysis of vlib. International Journal of Sustainable Transportation, 7(1):85106, 2013



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