Farmer Management System Using Integrated Chatbot

Prof. Amruta Bhawarthi[1], Anuja Kute[2], Lav Khullar[3], Digvijay Lagad[4], Tanisha Lakhotiya[5], Ketan Lawale[6], Chaitanya Lawande[7]

[1,2,3,4,5,6,7]Department of Engineering, Sciences and Humanities (DESH) Vishwakarma Institute of Technology, Pune, 411037, Maharashtra, India

Abstract:

The main aim of developing "Farm Management System Project" application is to help farmers by providing all kinds agriculture related information in the site. "Farm Management System Project" is web application which helps farmers to share best- practice farming processes. It helps farmers to improve their productivity and profitability. It enables farmers to sell their products online and farmers can purchase tools and seeds directly from seller. Farmers can view their profile and they can register, edit and delete data. The farmers can sell their productions online and the buyer can purchase various agricultural products online. Buyer can send purchase request to check the quality of the Agricultural product through mails .

Keywords: Farmer, Chatbot, Agriculture, Product, Management, System

1. INTRODUCTION

This farmer management system has been made to empower farmers with the tools and technology they need to thrive in an increasingly complex and competitive agricultural environment.

The main aim of developing "Farm Management System Project" application is to help farmers by providing all kinds agriculture related information in the site. "Farm Management System Project" is web application which helps farmers to share best practice farming processes. It helps farmers to improve their productivity and profitability. It enables farmers to sell their products online and farmers can purchase tools and seeds directly from seller. Farmers can view their profile and they can register, edit and delete data. The farmers can sell their productions online and the buyer can purchase various agricultural products online. Buyer can send purchase request to check the quality of the Agricultural products through mails. Through extensive research we have studied other farming management systems which have been made. We have tried to provide a form of communication for farmers through our farmer management system , while other management system tends to be a sort of a inventory keeper for the farmers our system is a sort of a profile keeper of farmers through which different farmers could contact the farmer they wish to do business with , related to agricultural products they want to buy from them .

The profiles will be in a website including the type of farming they perform , name etc . For the delivery enquires the user will be redirected directly to the mail of the farmer . Chatbot will be used for queries and give help regarding how to contact the farmers (redirection to mail-id of the farmer) etc .

Our device represents a significant leap forward in ensuring the growth and well-being of farmers. As we move forward, it's imperative that we continue to invest in innovative solutions like this to ensure the well-being of those who dedicate their lives to powering our communities. Together, we can make a real difference in the lives of farmers and their families.

2. LITERATURE REVIEW

There are few previously suggested systems which have played a small part in designing this system .

Farmer-Bot – An interactive Bot for Farmers. The chatbot answers query etc and paper includes information on how to integrate a chatbot. [1]

pilot study integrating an AI driven Chatbot in an introductory programming course .An intelligent chatbot interface for an introductory computer programming course. [2]

Agricultural Inventory Management System. Paper contains a detailed agricultural management system. [3]

Software for Research Farm Management System . Integrated application for farm management. Integrated application for farm management which works, on first building decision tree for recommendation of agricultural solutions that a research student (user) is looking for [4]

IOT Based Smart Agricultural System . Used for an alternative example has information related to an IOT based agricultural system [5]

Web-based Agricultural Monitoring and Sales Management System . the project is aimed at how agricultural farming can be improved with the expertise available through software engineering and more specifically through the proposed idea of a Web-based Agricultural Monitoring and Sales Management System. [6]

Intelligent Web App Chatbot . Paper contains information on LUIS (Language Understanding Intelligent Service) is a natural Language processing Artificial Intelligence for predicting human queries. [7]

Conversational AI Chatbot . Has an conversational chatbot . [8]

Automated conversation system for the educational domain. textual communication application namely chatbot in the educational domain. [9]

Managing Crop for Indian Farming Using IOT. Smart Crop Monitoring System implemented using Internet of Things for sensing environmental conditions and forwarding the data [10]

Farm Management Information System Using Future Internet Technologies. Simple record keeping software into complex systems that can manipulate large amounts of data and provide decision support capabilities. In this paper, the development of an FMIS, which utilizes new technologies, such as those which were introduced by the European initiative Future Internet Public-Private Partnership Program (FI-PPP), is described. [11]

3. METHODOLOGY

SOFTWARE REQUIREMENTS: Frontend- HTML, CSS, Java Script, Bootstrap Backend-Python flask (Python 3.7) , SQL Alchemy.

Needs Assesment: To create a framework for the Farmer management system with integrated chatbot,our team held discussions with a guide and properly examined the collected requirements to ensure project integrity.

Design and structure: Developed both the frontend and backend components of Farmers management system with integrated chatbot. For frontend we have used HTML,CSS ,Java Script , Bootstrap. For backend we used Python flask.

Database: Structured Query Language (SQL) is the language used to manipulate relational databases. SQL is tied very closely with the relational model.

1] In the relational model, data is stored in structures called relations or tables. SQL statements are issued for the purpose of: Farm Management System

2] Data definition: Defining tables and structures in the database (DDL used to create, alter and drop schema objects such as tables and indexes)

 • Development Process: - Using an incremental and iterative development methodology, the project was divided into smaller components and completed. Git and GitHub were used for collaboration through version control.

Implementation: An "implementation" of Python should be taken to mean a program or environment which provides support for the execution of programs written in the Python language, as represented by the CPython reference implementation.

There have been and are several distinct software packages providing of what we all recognize as Python, although some of those are more like distributions or variants of some existing implementation than a completely new implementation of the language.

 • Testing : We followed a testing-first approach to save time and ensure smooth development.
We tested backend APIs with XAMPP server for the proper functioning of all routes.

   • Continuous integration and deployment: - GitHub was used to ensure code quality and optimize development. Branches were created for collaborative development
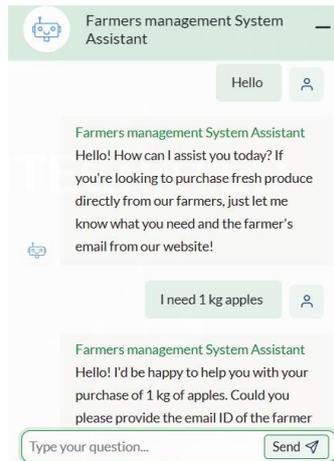
4. RESULTS

Image 1

This includes the opening page of the website including where the farmer can register his/her profile etc. add his choice of farming, add his/her details.

On the bottom right you will see the chatbot, Through the chatbot you can ask queries and it will help you in the communication with the farmer you wish to do buy from.
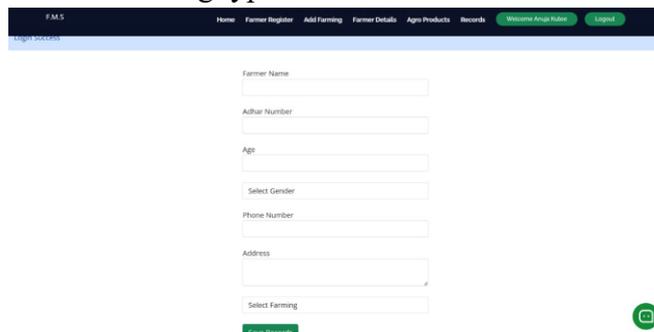
Image 2

Image 3

This is where the farmer can add a farming type if it isn't in the database.

Image 4

This is where the farmer can edit his/her profile.

Image 5

This is where the details stored can be viewed.

5. CONCLUSION

In conclusion our device represents a significant leap forward in ensuring the growth and well-being of farmers. As we move forward, it's imperative that we continue to invest in innovative solutions like this to ensure the well-being of those who dedicate their lives to powering our communities. Together, we can make a real difference in the lives of farmers and their families.

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