ADITYA ENGINEERING COLLEGE (A)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

FARMER'S TOUCH: HARNESSING TECHNOLOGIES TO ENHANCE CROP PRODUCTION

ABSTRACT

Modern agriculture aims to maximize output while conserving resources and cutting costs. Precision Agriculture, using tech to analyze field variations, boosts yield, profitability, and sustainability. Our project offers guidance on crop improvement via soil management, pest control, and marketing through a web App, chatbot, and SQL integration. It focuses on virtual blog content and web assistance for better crop growth and yield by invoking translator and secured browsing through API.

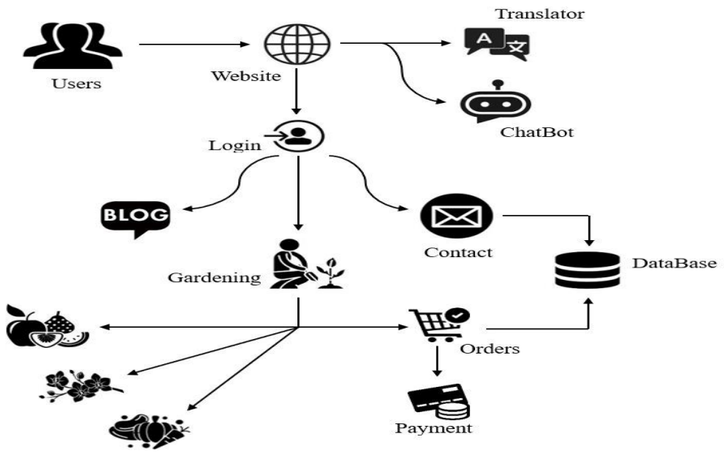
Keywords — Full Stack, Chat Bot, Machine Learning, API, SQL

OBJECTIVE

- Creating user-friendly interfaces for agriculture insights and guidance.
- Train and deploy machine learning-powered chatbots to provide assistance tailored to users.
- Provide secure and flexibility through API's and translator.

ARCHITECTURE

The main aim of the proposed model is to make people can use in small-scale or large-scale farm of land. The website is designed using full stack with API processing and chatbot with flask API. The features proposed in this system are designed in such a way that each feature performs a different task and has different workflows for various modules.

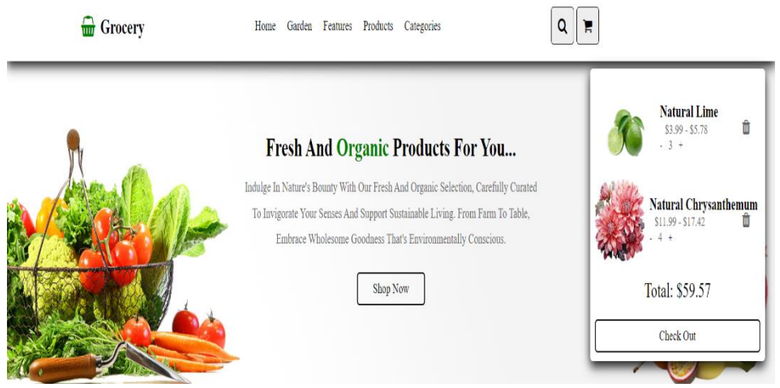


We seek to provide gardening enthusiasts with comprehensive guidance on the necessary precautions and measures required to achieve optimal yields in their gardens.

ALGORITHMS USED

The proposed model uses Artificial Neural Networks (ANN) algorithm. In this project we used combination of Artificial Neural Networks (ANN) and Natural Language Processing (NLP) for the processing of the data. The invoking of API for the secured browsing like Flask API and Google Translator API.

RESULT



CONCLUSION

Utilizing advanced tech like NLP and machine learning, this project democratizes expert agricultural guidance, aided by a multilingual chatbot, providing tailored recommendations and acting as a virtual hub for optimizing crop growth from soil to the yield and provides the marketing opportunities by customize their goods.

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