AI POWERED AGROBOT FINAL REPORT OUTLINE

1.0 PROBLEM DEFINITION AND PROJECT OVERVIEW

- The modern agricultural scenario has been chaotic as technology made inroads, so most of the farmers are unaware of the modern practices to overcome pests and other hindrances in a feasible way.
- The agrobot aims to provide the required impetus to the farmers regarding the modern practices, new farm laws, case study adaptations to overcome hindrances and also create an interface with the retailers for better price.
- The bot will be accessible on whatsapp,signal and telegram at the same time on a blockchain technology powered website still in development.
- The bot is empowered with versatile datasets such as Google IMAGENET so that it can associate itself with the required problems.
- The bot also is under constant updation utilising Q/A from many agricultural websites including agricoop.nic.in.

2.0 PHASE WISE DEVELOPMENT PROCESS

- The primary step was to perform a case study on the existing chatbots from IBM, Whatsapp which provide a customized user interface.
- As the next step, we devised a strategy to accumulate the suitable datasets, images and what all websites information to be linked so as to provide references and understand the queries better.
- The third step was defining the entities and choosing the platform language and other technologies such as Microsoft Azure cloud, Python, Anaconda, Aurora and Node JS.
- The key step was to develop the front-end and back -end development and integrate it into various social media platforms using the above technologies.
- We deployed the bot on a microsoft hosting service as a prototype for feedback and made few farmers test them gathering the required conversations and flaws making the necessary changes.

3.0 THE AGROBOT - NUANCES

- The AI powered agricultural chatbot is aimed at bridging the gap between technology and farming in India providing farmers with feasible and novel information for any queries.
- The bot although in its infancy provides a robust error free compatibility with the social media platforms it was intended for.
- The application is an amalgamation of the modern day bots and is a product of full stack development.
- Dialog flow powered by Google along with IMAGENET dataset was used to train the application to provide maximum user customization.
- Compatibility issues are an uncertainty for the future as it is yet to be deployed on websites.
- The initial requirement would be to add the bot into the userlist in Signal,Telegram and WhatsApp by using its number, this will be replaced later by the name when ready for full scale deployment.

4.0 EVALUATION CRITERIA

- The full scale deployment is yet to be completed which will be done after adding constraints to counteract abusive content and a default reply for unimplemented queries.
- The application was evaluated using unit testing and agile testing to pinpoint deficiencies and develop suitable contingencies.
- Implementing multi user interface and also testing against most asked questions -on various agricultural websites apart from Dialog flow.
- The interface is being even more customized by designing a separate website which will utilise Django and Blockchain technology.
- The final product will also include a crop monitoring dashboard, market supply chains and forum for discussion with a specialist panel.

5.0 CONCLUSION

- The AI - Blockchain infusion into agriculture was required to eliminate technological handicap in the Indian agricultural landscape.
- The agrobot powered by AI which is available on social media platforms will be easily accessible and used to clarify queries.
- The application development has opened a new horizon in adapting to various technologies such as the Azure platform, Django.
- Collective brainstorming and strategic planning helped us overcome the redundancies and complications involved in design and deployment.

- There are still discrepancies to deal with such as the website creation and automated answers to multiple queries.
- The future scope will be implementing the application on the blockchain driven website for providing end to end monitoring and support.