Methodology

- **Main Work:**

We can divide our application's main work into main four parts:

- Learning android developing basics (Flutter).

- Before developing our application, we needed to read about android because knowledge about android developing was not sufficient enough to start developing the project.

- Learning Machine learning techniques.

- Apply machine learning on the data set.

• **Applications and languages used:**

- Languages used:

▪ Dart language (Flutter).

▪ Python language.

▪ Microsoft SQL language.

- Applications used:

▪ Android Studio.

▪ Anaconda Platform.

▪ Microsoft VS (C# For API)

🪟 Farmer:

1- The user enters the required data to register an account on the application

2- The user enters the username and the password

3- As soon as the user opens the application, his personal page will open in front of him

Which contains his profile picture, his data, the plants he is interested in and many other data

4- The user has 4 operations available

　4.1- The Posts page, from which he can see the publications of others and his publications, and also he can comment on and interact with them.

　4.2- The plants doctor page: the user can upload a picture of the plant leaf, and the application will try to identify the type of pest present in the plant and how to treat it

　4.3- Calculator page: on this page, the user can specify the area of land that he will cultivate and also the type of crop in order for the application to show him the best fertilization plans

　4.4- Chat Bot page: On this page, the user can talk to the application about some general information about some plants.

Conclusion:

This application tries to save time: it helps the farmer to identify the pest by simply uploading a picture on the application, and also how to treat it instead of wasting the crop or waiting for the agricultural engineer to diagnose the condition of the plant, especially in home farming; It also helps you to learn information about plants quickly through the Chat-Bot or through the forum in the application

And this application also tries to save money: it saves you the money that you pay to the agricultural engineer who comes to constantly diagnose the plant and also increases and improves the quality of the crop, thus increasing the agricultural yield and quality; It also helps you to know the appropriate amount of fertilizer for you in farming for the area of land you own and the plant that you are planting by selecting the appropriate fertilizer plan, which protects you from increasing the percentage of fertilizer, spoiling the plant or lack of fertilizer, which leads to many diseases.

It also saves effort: it provides you with ease of use, speed of obtaining information and quick diagnosis

And finally: the application provides you with getting to know a new community that you were not aware of, so it

helps you to know general information that may help you later, and to know new friends that help them and help you get the best crops

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Future work:

In our future vision, this application can have many modifications, especially to make it collect material income for its owners.

The user can be made to follow another user, and a private communication system can also be developed within the application between users and each other, and it is also possible to modify and work on the plants doctor model to make it suitable for most of the plants that the search has increased and are not present, in addition, we can add a place For advertisements in the application, where pesticide and fertilizer companies can publish their advertisements in the application, and we can also put for some police plans fertilization for plants as a kind of advertising advertisement. It is possible to make it much easier, as the user asks and answers him with an answer

without choosing or restricting the user to a specific question and answer

It is possible, of course, to work on the interface in order to be easier to use and facilitate, and finally we can put a place for a guest inside the application where anyone can enter and browse the application from outside without registering an account on it and enjoying only the public services in it. If he likes the application and I like to He is part of this forum or community, so he creates an account on it and starts communicating and enjoying all the features of the application.