GRAM VIKAS (VILLAGE INTERACTION MACHINE)

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Keywords:

CNN, Flask, Python, Image Processing, Dataset, Leaf Recognition, OCR, Voice

Objectives:

1. Answering questions in English/local language.
2. Answering trained questions in Kannada.
3. Finding the composition of fertilization which is to be provided for better crop production.
4. Detecting the leaf and giving remedies for the particular disease.
5. We have used OCR (Optical Character recognition) to recognize the text.
6. Voice recognition as well as voice to text, and text to voice conversion.

Methodology:

The main aim why we are going for this project is to build the communication between the app and the village people and make it easy for the people who are not able to read or write. Here the user communicates with the app then the app will reply it back. The Kannada language has been trained by using Open CV and Python.

Our system proposed with the detection of leaf disease by taking input from the System, once the farmer shows the leaf to the system, our AI Machine will detect the disease affected and it gives the suitable remedies for the particular disease.

Work Plan:

We are looking forward to make an application which consist of a simple interface as well as easiest way for anyone who are illiterate to interact with the machine via voice, text or images to identify the problems and provide its solution in simple local language voice/text as per the user convenient. Thus, even provide others details such as governments funding as well as other schemes.

The other advantage includes to find infected crops condition by scanning providing a desired solution. This feature can also be useful for farmers for medical treatment of the plants.

As well as finding the composition of fertilization which is to be provided for better crop production.
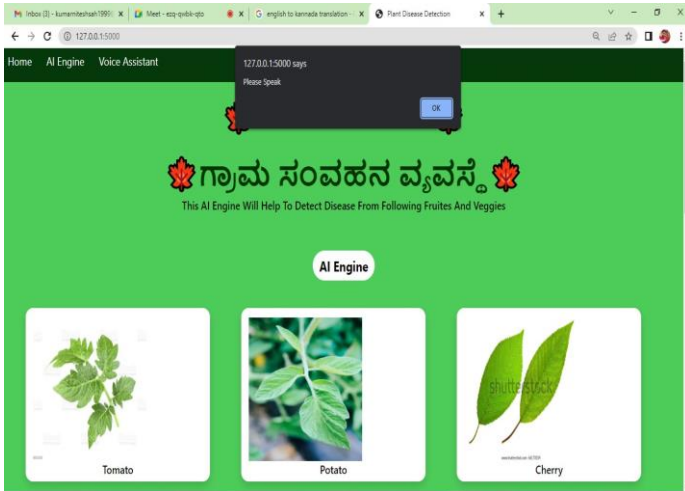
System Design:
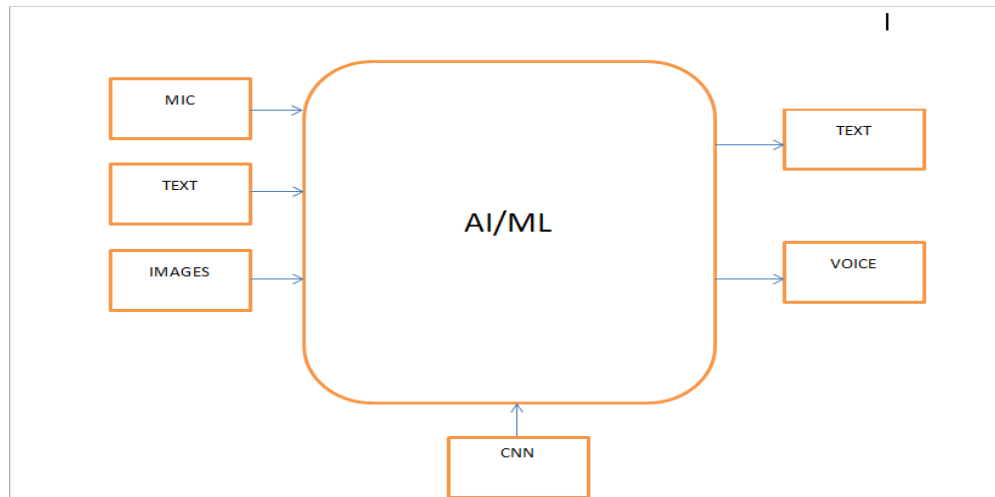
Experiments:

1. We have used CNN (Convolutional Neural Network) algorithm to train the data sets.
2. We have trained almost 6000 data sets.
3. We have used OCR (Optical Character recognition) to recognize the text.
4. We have used Speech recognition package to recognize the speech.
5. We are using plant/crop disease detection and finding the composition of fertilization which is to be provided for better crop production.
6. Updated/Latest schemes information provided to the farmers on monthly bases.

Results:
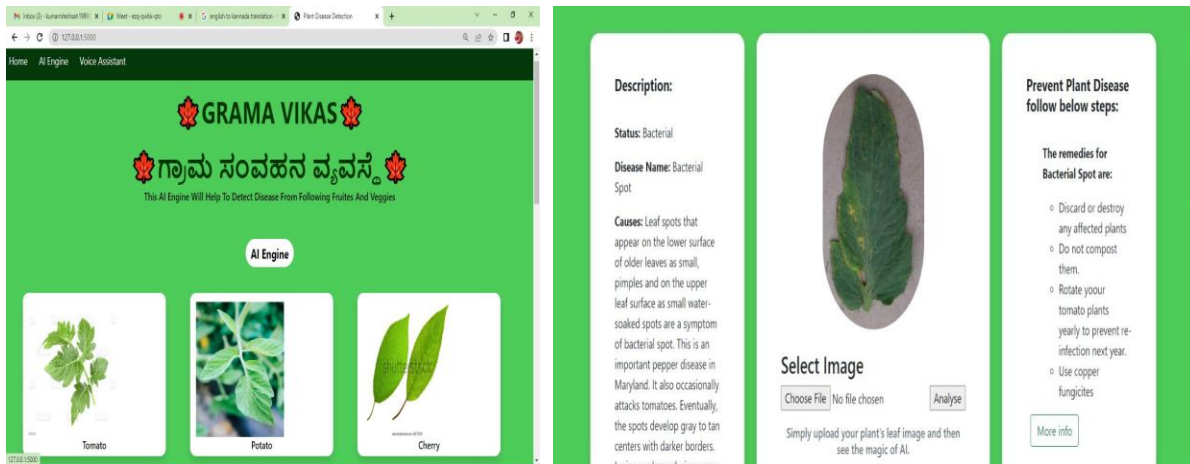
Identifying the disease in the leaf and demonstrating the necessary remedies

You can communicate with the system in your local language