

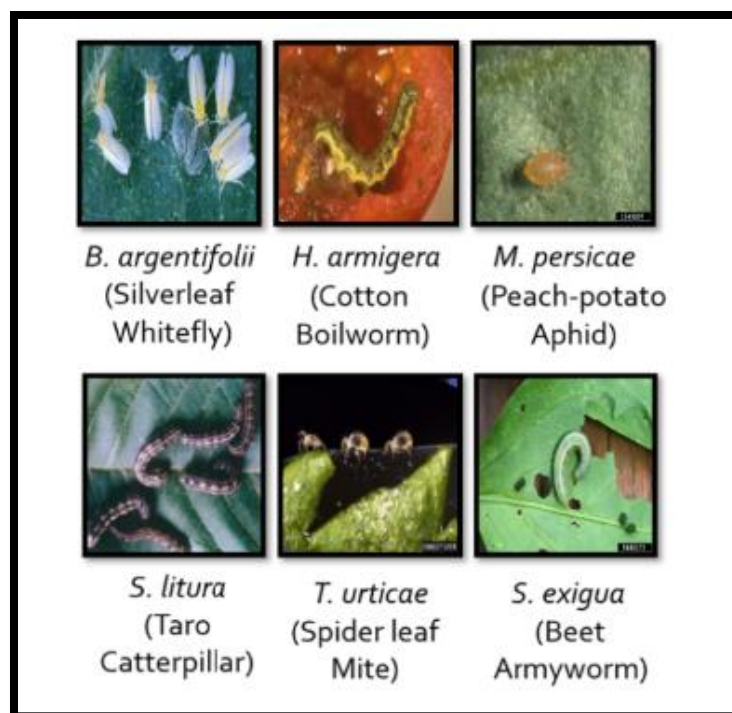
Welcome to the **AUTOMATO**  Mobile Pest Classification App!

App Overview:

Automato is a mobile app that performs automated image-based pest diagnosis through deep learning. The app has the following core features:

- **Image Capture** for capturing or selecting images of pests
- **Pest Diagnosis** for identifying tomato pests and potential interventions
- **User Feedback** for allowing users to send corrections for erroneous predictions

Our app currently supports the detection of the following pests:




System Requirements:

To successfully run the app, your Android device must possess the following characteristics:

- At least Android version 5.0 (Lollipop) or higher (API level 21+)
- Has the following features:
 - Camera: The app requires access to the device's camera for capturing photos of pest specimens.
 - Internet Connectivity: The app needs an active internet connection for the user to send feedback to developers.

Installation:

To install the app on your phone, simply download the APK included in the CD to your Android device. Once downloaded, simply tap on the APK and Android shall install the app for you. The app's icon  will appear after installation. Tap on it and the app will show you its landing page.

Usage:

Following is a typical workflow for performing image-based pest diagnosis, which is also shown in the following video (<https://www.youtube.com/watch?v=EZhPvaftGw8>).

Step 1. Insert an image of the pest. From the landing page, choose from either an existing picture from your gallery or a new one using your camera by tapping on the corresponding button. Doing so will insert the image of the specimen and activate the Diagnose Pest button, as shown below:



Step 2. Diagnose pest. Once the image of the specimen is inserted, click on the Diagnose Pest button. Doing so will take you to the Diagnosis page which contains the following information given a successful prediction:

- Specimen identified, with its scientific and common name
- The picture of the pest alongside a reference picture of the predicted specimen
- Confidence of the app with its predicted pest relative to other pests
- Possible interventions to manage the pest

A positive diagnosis sample is shown in the following figure:




If the app found no pest, it will inform the user of the negative diagnosis as well as some tips to improve capturing specimen images.

Step 3. Acknowledge or correct diagnosis. Scroll down to the bottom of the Diagnosis page. If you are satisfied with the diagnosis, you can simply click OK, taking you back to the landing page. However, if you think a different pest should have been predicted for a positive diagnosis or some pest should have been predicted for a negative diagnosis, click on “Mali ang Diagnosis” (Diagnosis was incorrect). Doing so will take you to the Feedback page as shown in the following:

FEEDBACK

Ano sa tingin mo ang peste na ito?





S. exigua (Beet armyworm)

email (optional)

SEND FEEDBACK

You can select the name of the pest from the drop-down list. The list includes an ‘Other’ option in the case of pests not covered by the app’s pest registry. Along with the corrected pest name, you can optionally include your email so that we can contact you for further correspondence. Once the form is filled, you can hit the Send Feedback button and our database will receive your proposed correction.

Troubleshooting:

Here are some issues you might encounter while using the app as well as some potential solutions:

Issue	Solution
The app is taking too long to diagnose the image.	Check your internet connection, and ensure that it is fast and stable enough. A speed of 5 Mbps should be sufficient for model prediction.
No pest was identified when in fact there was a pest. Or, the pest was identified incorrectly.	Take/use a clear picture of the pest for a more accurate prediction. If you suspect the diagnosis is still incorrect, you can use the feedback form by clicking on the Send Feedback button at the bottom of the Diagnosis page
The app indicates that it cannot send my feedback.	Check your internet connection, and ensure that it is fast and stable enough. A speed of 5 Mbps should be sufficient for sending your feedback.

Connect and Collaborate:

You can reach out to the developers through ikinglopez1@gmail.com for any comments, questions, and suggestions. If you wish to contribute to or view the source code, visit the Github repository at <https://github.com/LopezJER/Automato>. We appreciate your engagement with us! 😊