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Test Manual

Agriculture Pest Control Application

CITS5206

Group 5205_2

1. Objective

To describe the strategy for Acceptance Testing for the Agriculture Pest Control Application to verify compliance with requirements as specified in the scope of the project. Forecasting the testing strategy, the unit tests, integration test and system tests listed in this document. This document outlines the steps required to prepare an Acceptance Test Plan. It also ensures that all components of the system are tested.

2. Test Summary

The subsystems of the Agriculture Pest Control System such as Camera, collecting data, displaying data, user interface is tested in this document.

3. Testing Strategy

3.1 Types of testing

The approach that is used to test Agriculture Pest Control Application are functional testing, system testing and integration testing.

3.2 Test Data

The test data resources would be the pictures taken from camera with snails or may request the client with some test data.

3.3 Roles and Responsibilities

All the team members are responsible for unit testing, integration testing and system testing except the acceptance testing as this has to be approved by the client.

4. **Test A**

Deploying the deep learning model into mobile application. Client will be giving the model to deploy; we need to test whether its working properly by detecting the snails in the pictures.

Test Description

The steps required to perform test are:

1. Deep learning model
2. Android Mobile application
3. Try using pictures which has snails

Expected Result: Output should be count of snails in the picture

If error has been discovered, there might be bugs in deep learning model which needs to be sorted out.

5. **Test B**

Test whether the application is displaying the correct number of snails and the deep learning model detects the snails accurately.

Test Description:

The steps required to perform test are:

1. Deploy deep learning model into mobile application
2. Check whether the model is detecting the snails by using different pictures
3. Check whether the count that is displayed is correct

Expected Result: Detects the snails accurately and displays correct count of snails.

If error has been discovered, we need to check whether its because of the deep learning model or with other functional aspects of the project and fix it.

6. **Test C**

Testing the Camera function inside the mobile application. Camera is used to take pictures of the farm lands which are then used for counting the snails.

Test Description

The steps required to perform test are:

1. Mobile application
2. Camera API/ using the existing camera apps in the device
3. Android Studio

Expected Result: The application should take photos and store

If error has been discovered, we need to debug the code or Camera API, button functionality.

7. Test D

Test whether the user can download the application without any issues.

Test Description

The steps required to perform test are:

1. Android Mobile
2. Download Application

Expected Result: The application should be downloaded into mobile without any issues.

If error ahs been discovered, the team members need to debug the problem and fix it.

8. Test E

Test the Agriculture Pest Control Application with end-users (client).

Test Description

The steps required to perform test are:

1. Android Mobile
2. Download the Agriculture Pest Control Application
3. Testing all the components of the application
4. Testing the User Interface

Expected Result: The overall outcome should be accepted by the client.

If error has been discovered, the team members would be testing the application again and fix if there are any issues or bugs.

9. Test Materials

The resources required to test the Agriculture Pest Control Application are deep learning model, Android Studio, TensorFlow, Google API, Android Mobile.

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