

Down-Boy

Student Name: Gavin Soady Student ID: 2009115411

Monty our pet dog knows he's not allowed on the couch, but will chance his paw every now again when we are not looking. Despite his sneaky demeanor he is very obedient and will get down the second he's told.

So my project proposal is called Down-boy. Using the raspberry pi camera to track Monty's movement if/when he gets up on the couch the Application should do a number of things.

1. Detect dog movement on the couch(camera set-up to only have couch in view).
2. Take a picture of the rule breaker.
3. Broadcast a prerecorded message to the smart speaker to tell the mutineer to get down.
4. If second infringement is caught within a determined period of time, send a picture to a phone application.
5. The phone app will allow the user to Broadcast a message to the smart speaker, request an up to date picture and option to connect via live stream.
6. Disconnect from live stream and reset procedure.

Tools, Technologies and Equipment

Hardware:

1. Raspberry Pi
2. Raspberry Pi Camera
3. Google home mini smart speaker
4. Mobile phone

Software for Raspberry Pi:

1. Python
2. Raspberry Pi OS
3. picamera

Software for Mobile Application:

1. HTML5/CSS3/JavaScript
2. Java
3. Play Framework(This may have to be deployed on a separate website)
4. Phone Gap/Ionic

Project Repository

<https://github.com/Gavin-Soady/IOTApp.git>