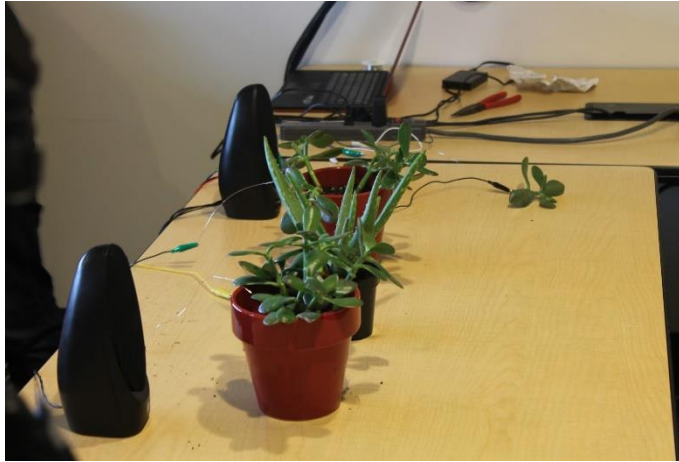


How to Build CommuniTree Touch System



This document will show one how to setup the capacitive touch system used for CommuniTree's interactive art installation involving plants. The system uses physical computing (raspberry pi 2) and water dense plants; where sounds play when a plant is touched by human contact. Below is a list of materials needed for constructing this portion of the project.

Materials:

For specific information on electrical components visit: <https://www.adafruit.com/products/2340>

- Adafruit Capacitive Touch HAT for Raspberry Pi – Mini Kit – MPR121
- Raspberry Pi 2
- 12 Small Alligator Clips
- Insulated Copper Wire 20 gauge, cut 8 ten inch wires with ends stripped at least 1 cm.
- 8 succulent plants (Aloe Vera Works Best)
- Speakers with aux jack

Step 1:

Install python library onto your Raspberry Pi 2 from [git@git.assembla.com:uwb-2016-communitree.touch.git](https://git.assembla.com:uwb-2016-communitree.touch.git) if using SSH or from <https://git.assembla.com/uwb-2016-communitree.touch.git>.

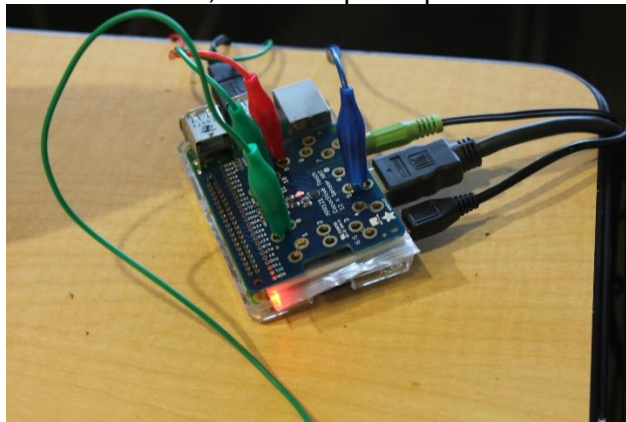
Step 2:

Attach the capacitive touch hat to the top of the Raspberry Pi, it will connect to the GPIO Pins; it will fit snugly.



Step 3:

Attach 8 alligator clips to the first 8 pins on the touch hat. Attach the other ends of the alligator clips to the insulated wires, one wire per clip.



Step 4:

Now connect each insulated wire to a plant, the stripped tip should be punctured into the base of the plant (the root). You can put the wire into soil as long as each plant is in a separate pot.



Step 5:

Connect the speakers to the pi, power cable, any external devices (mouse & keyboard), and then access the pi through SSH or via an external monitor using the HDMI port.

Step 6:

You are now ready to run the program to create an interactive experience with plants!

Go into the “CommuniTree_Programs” folder on your Raspberry Pi and then run the program titled “sound_touchNew.py”.