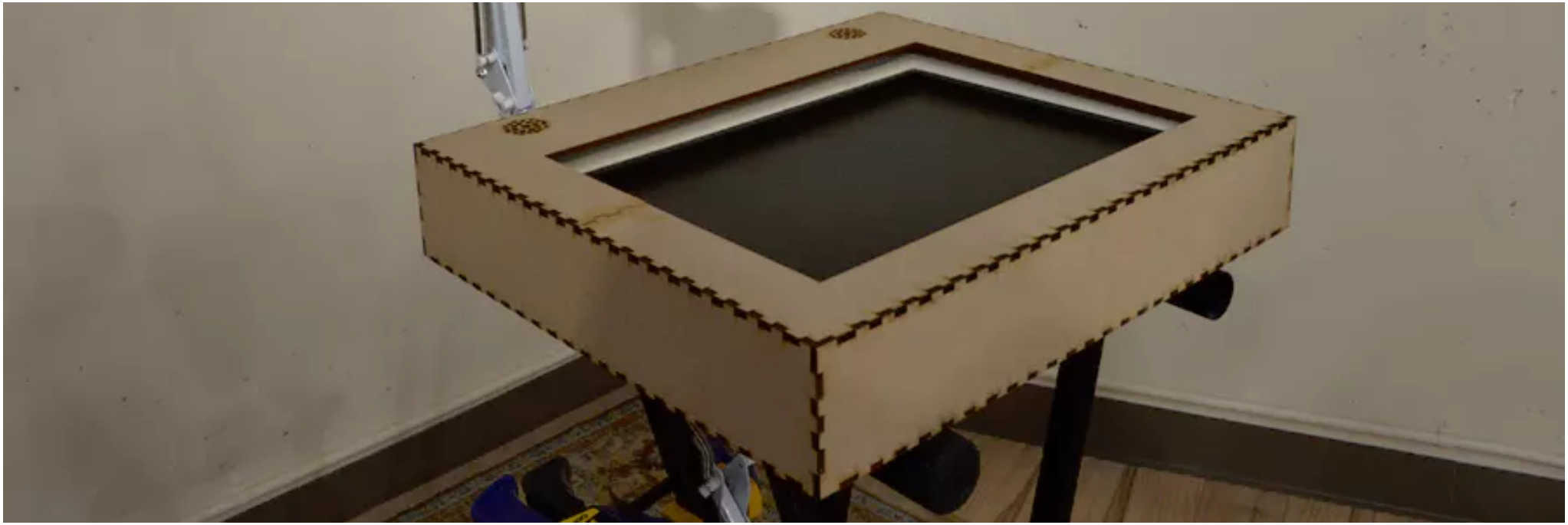
TrashScan

Made by Team TrashScan (Lesley Chiang (/lechiang2904), Rachel Lin (/rachellin), Jessie Salas (/salas), Chonyi Lama (/vulvasaur), and Drake Myers (/ddmyers))



🎓 This project is part of Critical Practices - Fall 2015 @UC Berkeley / Provocation 03: Collaborative Consumption (/courses/uc-berkeley/critical-practices/fall-2015/assignments/6)

ABOUT THIS PROJECT

TrashScan is an interactive device that educates community members about sustainability in a fun and interactive way.

computer vision (/projects/tags/computer+vision) **machine learning (/projects/tags/machine+learning)** **sustainability (/projects/tags/sustainability)**

PROJECT INFO

Type	Showcase (no instructions)
Difficulty	**‼ Super hard (/projects?difficulty=hardcore)**
Created	December 9, 2015

THINGS USED IN THIS PROJECT

Hardware components:

	Raspberry Pi 2 Model B (/raspberry-pi/products/raspberry-pi-2-model-b)	×	1	(/products/buy/34?s=BAhJIhYxNDc2NyxCYXNlQXJ0aWNsZQY6BkVG%0A)
	Raspberry Pi Camera module (/raspberry-pi/products/camera-module)	×	1	(/products/buy/20568?s=BAhJIhYxNDc2NyxCYXNlQXJ0aWNsZQY6BkVG%0A)
	Edimax USB 2.0 Wireless Adapter	×	1	

Compaq FP745A LCD Computer Moniter	×	1
12"x24" Eco-Wood sheet	×	3
X-Frame Piano Stand	×	1
Lamp	×	1
Duct Tape	×	1

Software apps and online services:

CamFind
This is the backend service which powered our image recognition.

(http://camfindapp.com/)

Hand tools and fabrication machines:


Laser cutter (generic)


3D Printer (generic)

STORY

TrashScan is a revolutionary new way of waste management and sorting. With it, we can more easily sort trash into the correct bins: compost, bottles & cans, mixed paper, and landfill. Simply place your trash on top of the platform and TrashScan will let you know which bin to place it in. This technology not only makes it easier to sort trash, but it works towards educating users on the intricacies of recycling and composting in order help communities achieve zero waste by 2020.

Our Community

Read more

To select our community, each of our group members interviewed friends who were part of communities outside of our own. Some of these communities included Cal Recycling, Campus Ambassadors, and Bear Walk. Ultimately, we selected Cal Recycling,

CUSTOM PARTS AND ENCLOSURES

Box Parts **Download (https://halckemy.s3.amazonaws.com/uploads/document/file/99483/moniter_box.ai)**

moniter_box.ai

Raspberry Pi Camera Case **Download (https://halckemy.s3.amazonaws.com/uploads/sketchfab_file/file/100994/raspberri_pi_camera_case_back_v0.1r.stl)**

raspberri_pi_camera_case_back_v0.1r
by Hackster.io

Raspberry Pi Camera Case Front **Download (https://halckemy.s3.amazonaws.com/uploads/sketchfab_file/file/100998/raspberri_pi_camera_case_front_v0.1r.stl)**

raspberri_pi_camera_case_front_v0.1r
by Hackster.io

CODE

compost.pyde

default.pyde

landfill.pyde

mixedpaper.pyde

bottles_cans.pyde

compost.pyde Python

our animation for "Compost"
made in Processing

(/code_files/47957/download)

```
fill(0, 102, 153, 204)
originX = dWidth-600
#text("COMPOST", (displayWidth)/2+(displayWidth)/7, (displayHeight/2), -30)  # Specify a z-
textSize(22)
fill(random(256), random(256), random(256))
text("If it was alive before, you can compost!", dWidth-400, (dHeight-(dHeight/3))-50)

global xpos, ypos, xdirection, ydirection
 # Update the position of the shape.
xpos += 1.5*XSpeed * xdirection
ypos += 1.5*YSpeed * ydirection

# Test to see if the shape exceeds the boundaries of the screen.
# If it does, reverse its direction by multiplying by -1.
if (xpos < Radius) or (width - Radius < xpos):
    xdirection *= -1

if (ypos < Radius) or (height - Radius < ypos):
    ydirection *= -1

saveFrame()
```

TrashScan

Here is the python source code linked on github.

JessieSalas (https://github.com/JessieSalas) / **sustainability (https://github.com/JessieSalas/sustainability)**

Sustainability education platform, public art using raspberry pi and image recognition. — Read More (https://github.com/JessieSalas/sustainability#readme)

Latest commit to the **master** branch on 12-17-2015

Download as zip (https://github.com/JessieSalas/sustainability/archive/master.zip)

CREDITS

Lesley Chiang (/lechiang2904)

(/lechiang2904) **Follow**

Contact (/users/sign_up?redirect_to=%2Fmessages%2Fnew%3Frecipient_id%3D2700&source=user_contact)

(/rachellin) **Rachel Lin (/rachellin)**
Designer + Developer

Follow **Contact (/users/sign_up?redirect_to=%2Fmessages%2Fnew%3Frecipient_id%3D34479&source=user_contact)**

(/salas) **Jessie Salas (/salas)**
Machine learning and NLP

Follow **Contact (/users/sign_up?redirect_to=%2Fmessages%2Fnew%3Frecipient_id%3D34508&source=user_contact)**

(/vulvasaur) **Chonyi Lama (/vulvasaur)**

Follow **Contact (/users/sign_up?redirect_to=%2Fmessages%2Fnew%3Frecipient_id%3D34013&source=user_contact)**

(/ddmyers) **Drake Myers (/ddmyers)**

Follow **Contact (/users/sign_up?redirect_to=%2Fmessages%2Fnew%3Frecipient_id%3D5257&source=user_contact)**

REPLICATIONS

Did you replicate this project? Share it!

I made one

Love this project? Think it could be improved? Tell us what you think!

Give feedback

COMMENTS

Please log in (/users/sign_in?id=14767&m=base_article&reason=comment&redirect_to=%2Ftrashscan%2Ftrashscan-3ca9fe%23comments) or sign up (/users/sign_up?id=14767&m=base_article&reason=comment&redirect_to=%2Ftrashscan%2Ftrashscan-3ca9fe%23comments&source=popup) to comment.

Be the first to comment!

Support Center (http://help.hackster.io)
Developer API (https://hacksterio.api-docs.io/2.0)
Sitemap (/sitemap.xml.html)