

Creative Coding

class { Hello World }

COD 208 - Week 01 Class →



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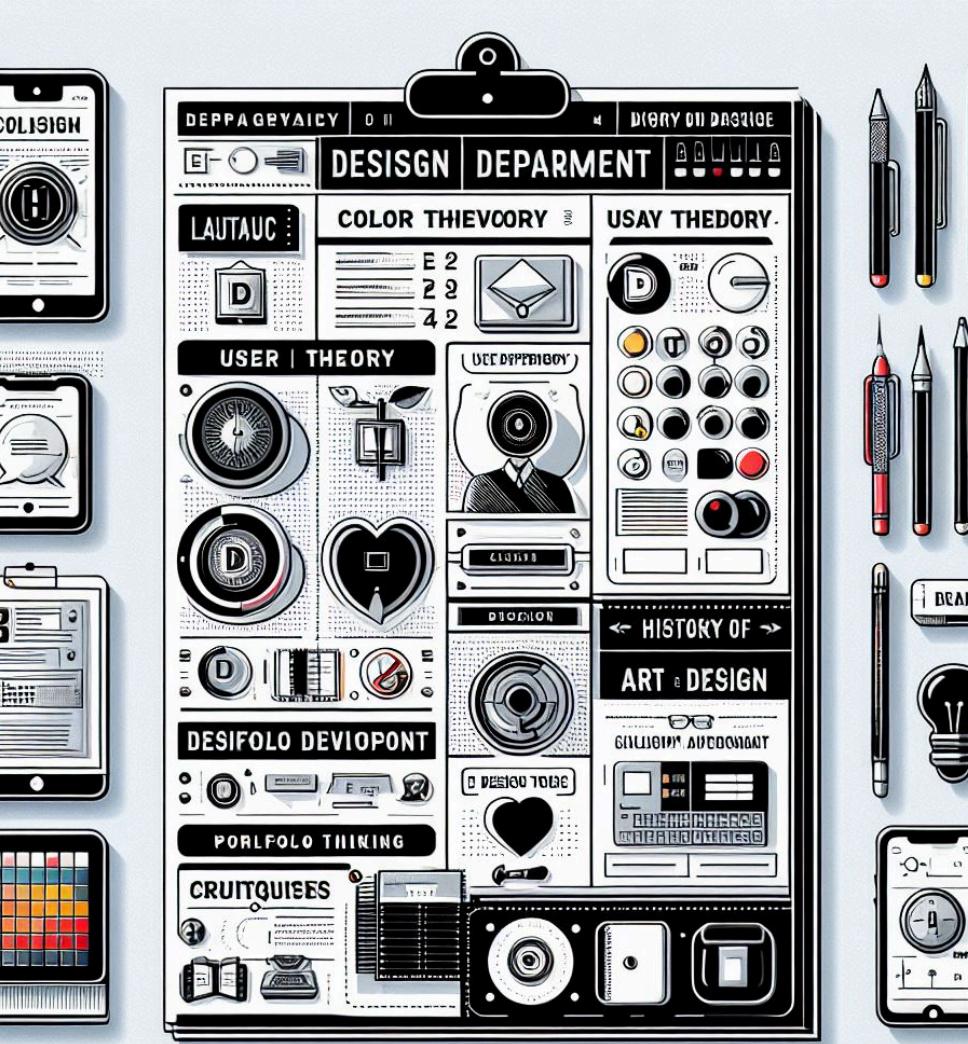
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Introduction

Things we learn about programming paradigms last semester.

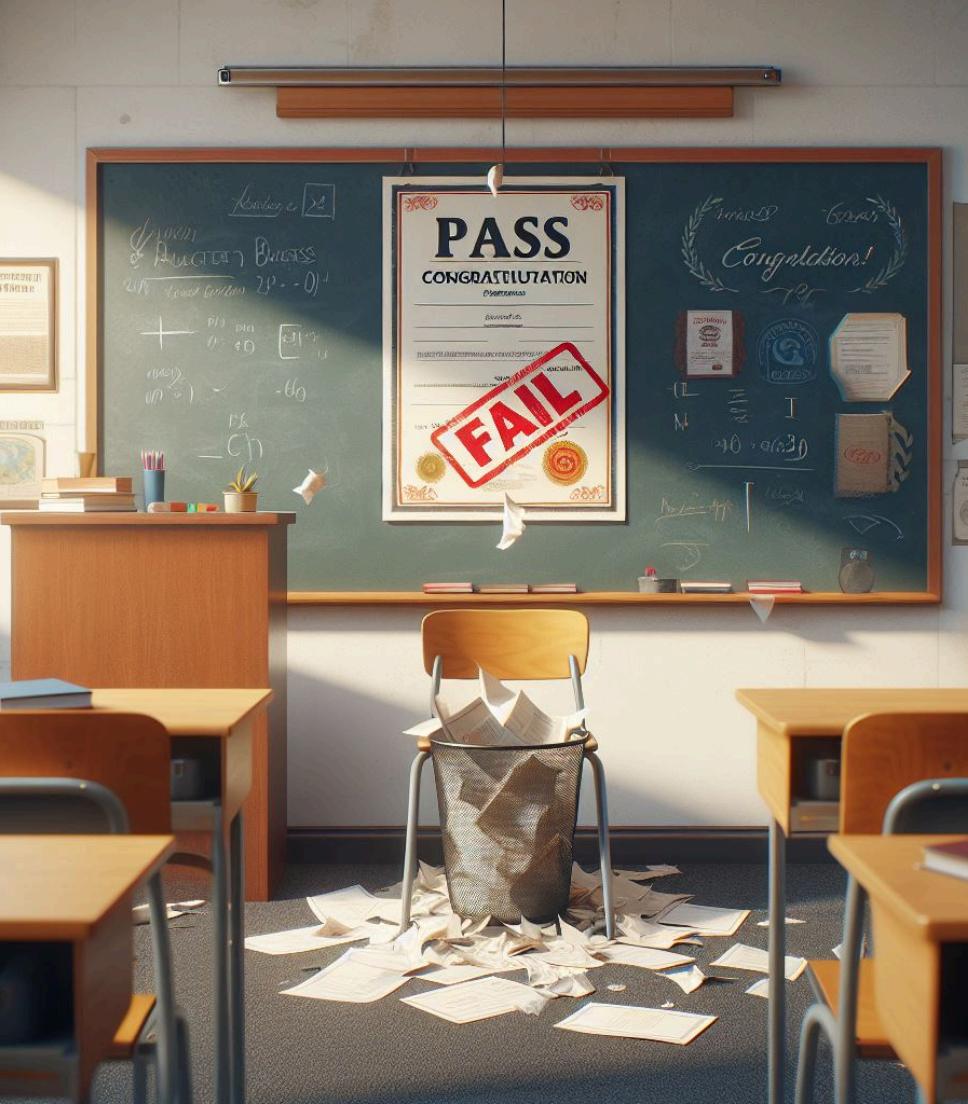
- Cartesian Coordinate System (How canvas positioning works)
- Simple and custom shapes
- Functions
- Randomness
- Motion
- Generative Art
- Computational Thinking
- Interactivity



Syllabus and Grading Policy

It is uploaded to the LMS. The content may change but concepts will be same.

- 20% Assignments
- 30% Final Project
- 25% Attendance
- 15% Presentation
- 10% Interaction/Personal Credit



Fail or Pass

It is up to you!

- if (missed_assignments > 3) FAIL
- if (missed_classes > 3) FAIL
- if (missed_finalProject || missed_proposal > 0)
FAIL

Course Content



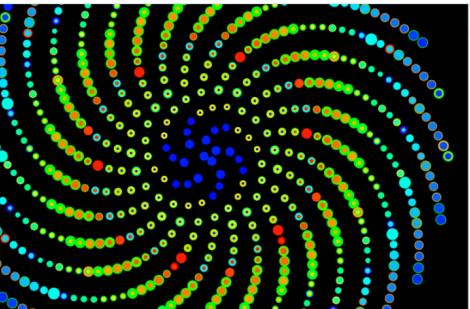
All, one-cgames, pyphiy click apps, extemical computing, gengeritive art

Topics to Discuss Through semester

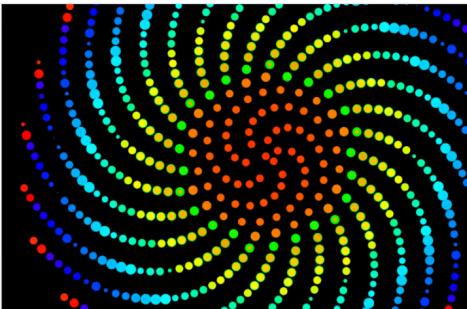
- Machine Learning
- Simple 2D Games
- Experimental Interfaces
- Generative Art
- Physical Computing

Artificial Intelligence

Machine Learning - AI Models - Teaching Something to a Model

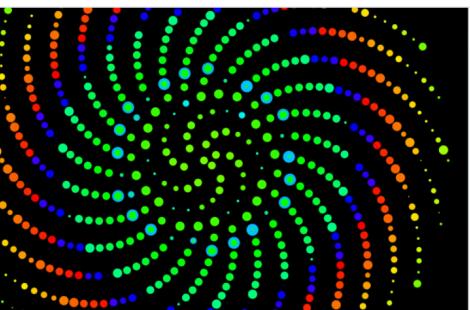


flower was created using a portion of the
d from Carl Sagan's Pale Blue Dot speech.
ce [LINK](#)



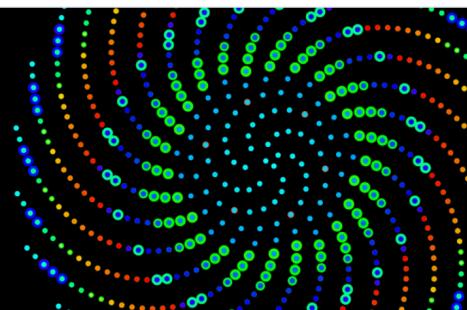
This flower was created using a portion of the
sound from Donna Strickland: Nobel Lecture in
Physics 2018.

source [LINK](#)



flower was created using a portion of the
d from Khan's Academy lesson on Adding and
racting fractions.

ce [LINK](#)



This flower was created using a portion of the
sound from the video Guess the Animal Sound
Game | 30 Animal Sounds Quiz | Wildlife Trivia.

source [LINK](#)

Flowers From Speech Recognition

- reference
- ML5 Machine Learning Library

Interactive Story Telling



Space Oddity - Performance w/ Posenet, ml5.js & p5.js - Live at PCDNYC 2019



Paylaş

A man in a black hoodie stands behind a wooden podium, speaking into a microphone. He is wearing glasses and has a small name tag pinned to his shirt. In front of him is a laptop on the podium. To his right, another man sits at a table, playing a guitar. A large projection screen behind them displays a video player interface. On the left side of the screen, there is a block of JavaScript code. In the center, there is a video frame showing a portrait of David Bowie with red paint on his face, set against a blue background with a small rocket ship. On the right side of the screen, there is a control panel with various buttons and sliders. A large red play button is overlaid in the center of the video frame. The bottom of the screen shows a Mac OS X dock with icons for Finder, Mail, Safari, and other applications. The room has wooden walls and doors.

Simple Game + ML



Flappy Pose - Flappy bird but where you flap your arms 🐦



Score: 24



Paylaş



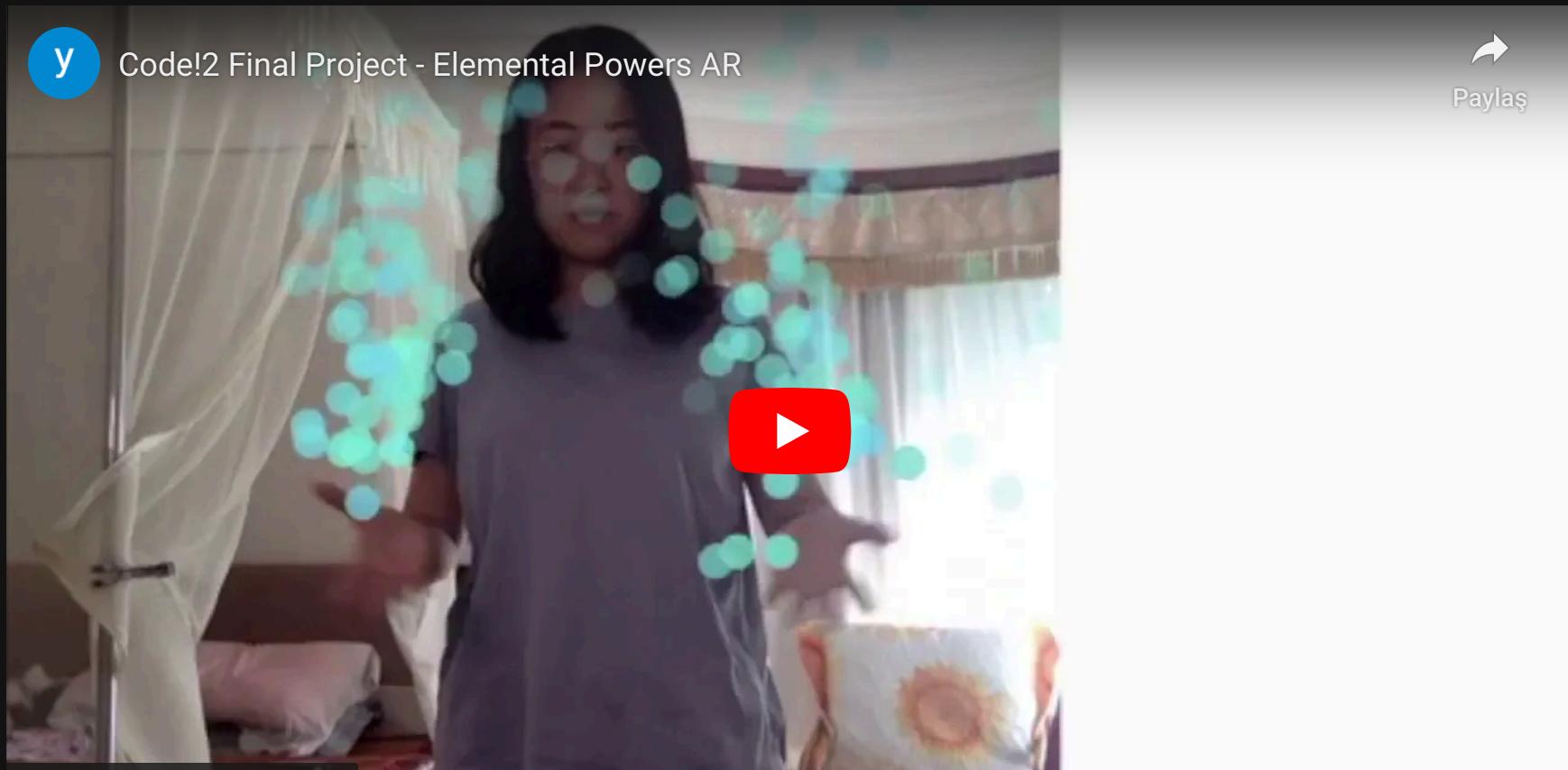
Experimental Interface + ML



A woman with long brown hair is speaking directly to the camera. Behind her is a code editor window displaying JavaScript code related to the project. The code includes functions for setting up audio contexts and disconnecting effects. The title of the code editor is "index.js". The text "ML5.js & WEB AUDIO API" is overlaid at the bottom of the frame in large white letters. The code editor shows lines 171 through 191 of the script.

Adver Game

In short, an advergame is a video game created to promote a specific brand or product.



Generative Art + Yoga + ML



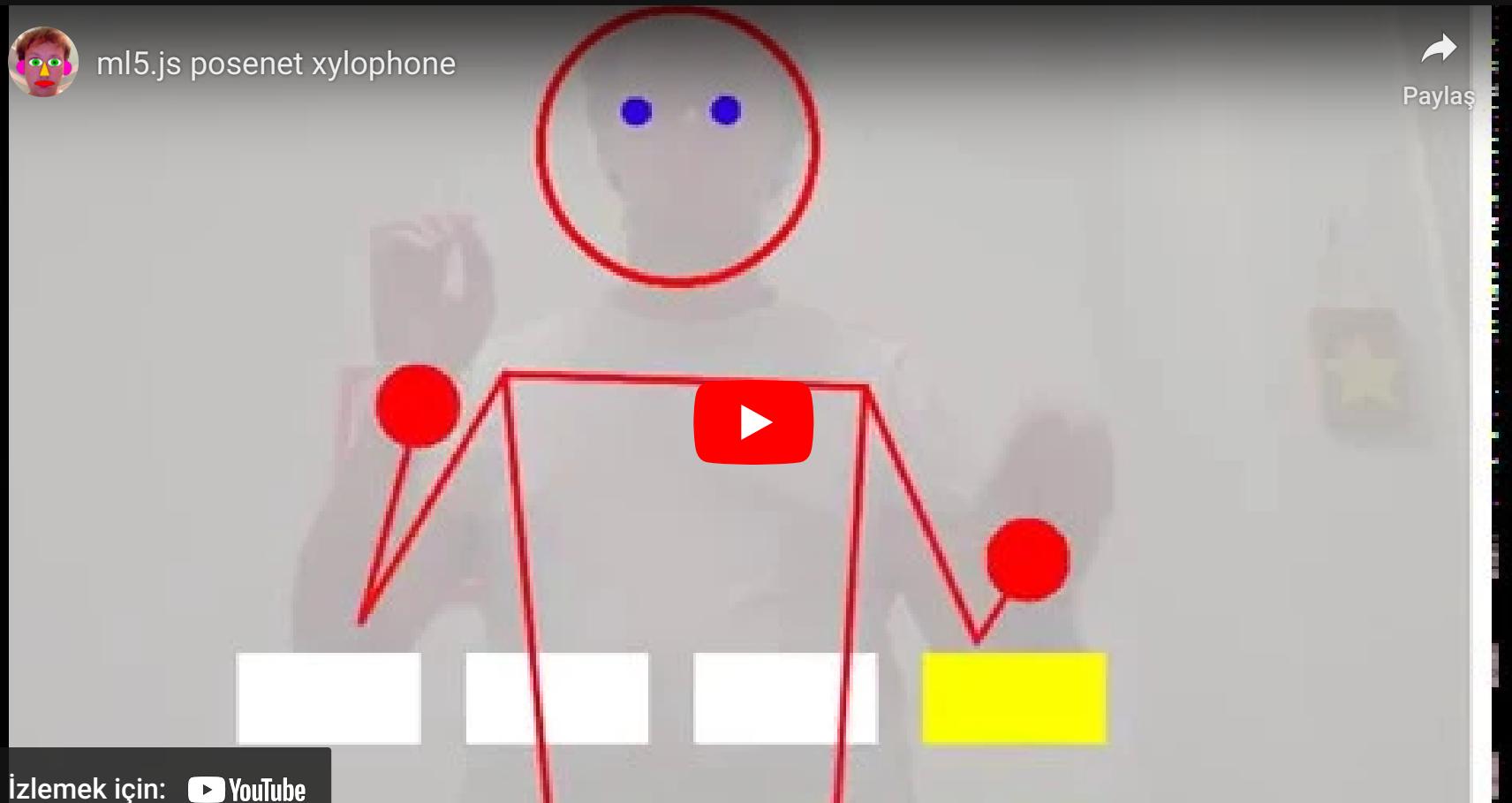
Yoga + PoseNet with P5.js



Paylaş



New Musical Interface + ML



Apps for Disabled People

ml5 PoseNet hands free Xylophone

p5 Auto-refresh ml5 pose move w/ camera & real-extractor w/ sound copy ↗ by mrbomormusic Hello, mrbomormusic! | Paylaş

sketch.b Preview

```
1 let video;
2 let poseNet;
3 let poses = [];
4 let mobilenet;
5 let classifier;
6 let label = '';
7 let addButton1;
8 let addButton2;
9 let addButton3;
10 let addImageButton;
11 let trainButton;
12 let oscButton;
13 let oscPlay = true;
14 let newImage;
15 let addingImage = false;
16 let imageSlider;
17 let n = 8;
18
19 let move = 0;
```

Options

- Image0
- Image0
- Image0
- Image0
- Image0

Add New Image train

A large red play button is overlaid on the preview window.

Apps for Disabled People

W3_Love Or Not

Auto-refresh by yz8005

sketch.js Saved: 7 days ago Preview

```
const myModelLink = "https://teachablemachine.withgoogle.com/models/zHsFtfrzx/";
//Image
let myImageModel;
let myVideo;
let myResults;
const EMOJI_LABEL_MAP = {
  "Heart" : "❤",
  "Heartbreak" : "💔"
}
function setup() {
  myVideo = createCapture(VIDEO);
  myVideo.hide();
  createCanvas(640, 480);
  myImageModel = ml5.imageClassifier(myModelLink, gotModel);
  textAlign(CENTER);
  textSize(64);
  fill("pink");
  stroke("white");
}
function draw() {
  myVideo.loadPixels();
  myImageModel.classify(myVideo, gotResults);
  if (myResults[0].label === "Heartbreak") {
    fill("red");
    text("Heartbreak", 320, 480);
    fill("pink");
    text("Heart", 320, 480);
  } else {
    fill("red");
    text("Love", 320, 480);
    fill("pink");
    text("Heart", 320, 480);
  }
}
```

Console

t {video: undefined, model: e, mapStringToIndex: Array(2), modelUr... withgoogle.com/models/zHsFtfrzx/model.json

Paylas

izlemek için: [YouTube](#)

New Musical Interface

posenet chord intervals w/ ml5.js, p5.js & tone.js

Sketch Files

- sketch.js*
- Index.html
- style.css
- bars.js

```

97 Tone.Transport.scheduleRepeat(triggerSynth, "4n");
98
99
100 function draw() {
101   // background(220);
102   image(video, 0, 0);
103   background(220, 200);
104   for (let j = 0; j < bars.length; j++) {
105     bars[j].reset();
106   }
107
108   for (let i = 0; i < posesX.length; i++) {
109     for (let k = 0; k < bars.length; k++) {
110       bars[k].update(posesX[i]);
111       bars[k].display();
112     }
113   }
114   drawKeypoints();
115   drawSkeleton();
116 }
117
118 function drawKeypoints() {
119   for (let i = 0; i < posesX.length; i++) {
120     noStroke();
121     fill(255, 0, 189);
122     ellipse(posesX[i], posesY[i], 16);
123   }
124 }

```

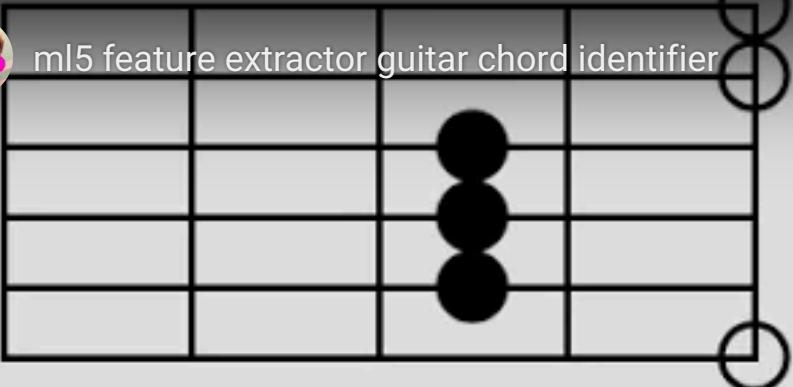
Start Posenet

Major

Paylaş

izlemek için: [YouTube](#)

Educational Music App



ml5 feature extractor guitar chord identifier

A Major

[YouTube](#)





Paylaş

Tea time!

BREAK

10 mins.

Games



An Infinite Chapbook of Poetry for Many Voices to Scream in the Woods

Uh oh, SCREAMING HOUR is almost here and ...

Emma Conner

Adventure

[Play in browser](#)



Let's Farm Incremental Game (Final Version)

Progress throughout the game to unlock differ...

Benjamin Mai

[Play in browser](#)



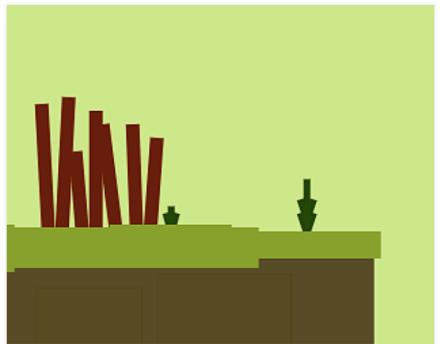
Second

Sho

Saks

Action

[Play](#)

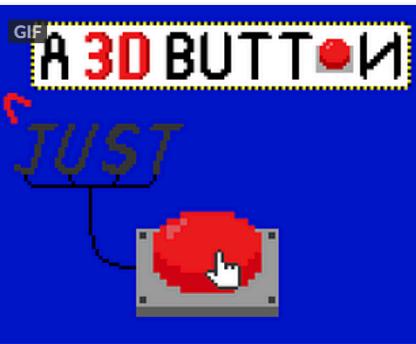


Inhotim

A thing about open-air art museums.

Caleb Winston

[Play in browser](#)



Just-A-3D-Button

A COOKIE-CLICKER-like game but with MUC...

DQG

Puzzle

[Play in browser](#)



Turnip

Half...

Action

[Play](#)

One-click Games

- [itch.io](#)
- [Catching Fallen Items](#)
- [Classic Snake Game](#)
- [Clicking Objects](#)

Top-Scrolling Game

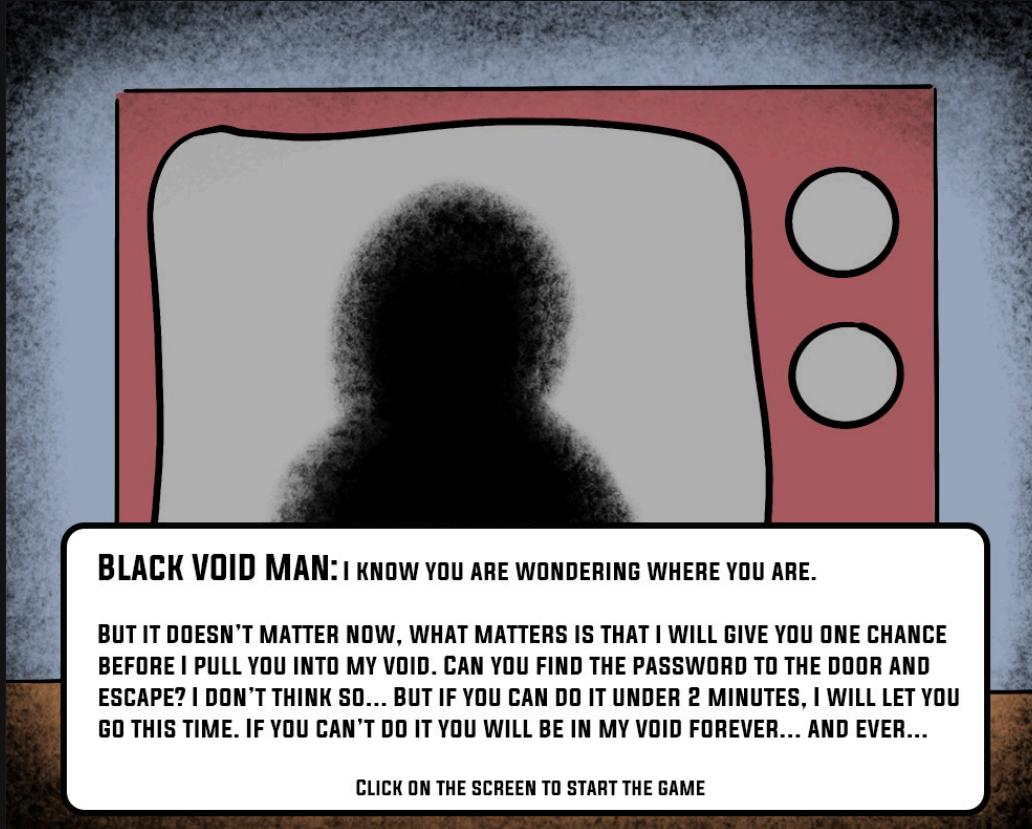
Game: Save Your Country by Ali Emre Tunalı

The image displays three panels of a top-scrolling game titled "Save Your Country" by Ali Emre Tunalı.

- Intro Scene:** A yellow panel featuring a city skyline silhouette against a blue background. The text "SAVE YOUR COUNTRY" is at the top, and a large "START" button is at the bottom. Below the panel are three items:
 - 1. Background Illustration
 - 2. Call to action button
 - 3. Music
- Game Play Scene:** An orange panel showing a top-down view of a road with a dashed center line. Two small enemy planes are visible. The text "KILLED ENEMIES: 2" is at the top left. Below the panel are three items:
 - 1. Enemies
 - 2. Hero
 - 3. Information Text
 - 4. Sound FX
 - 4. Music
- Game End Scene:** A grey panel showing a destroyed cityscape with rubble and fires. The text "YOU LOSE" is at the top, followed by a large number "2". Below it, the message "YOU COULDN'T PROTECT POLAND, HITLER STARTED THE WAR." is displayed. A "TRY AGAIN" button is at the bottom. Below the panel are three items:
 - 1. Background
 - 2. Call to action button
 - 3. Music

Puzzle Game

Game: Black Void Man by Dilara Albayrak



Collect The Trash

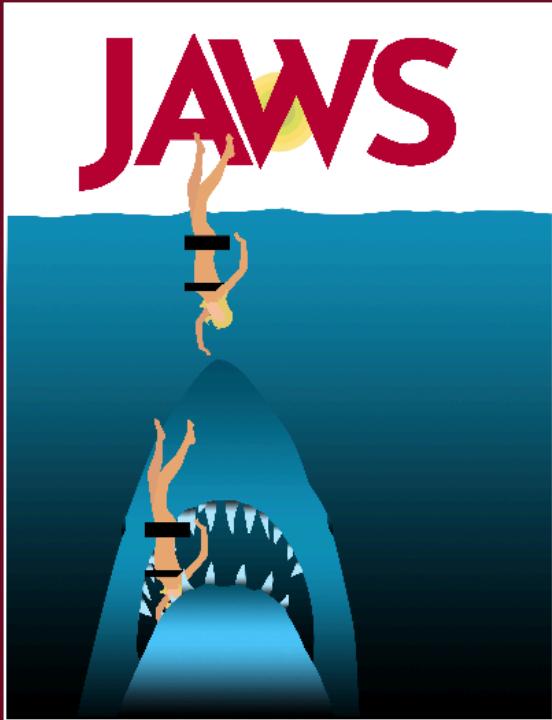
Game: Educational Reflex App by Almira Oğuz



*The terrifying motion picture
from the terrifying No. 1 best seller.*

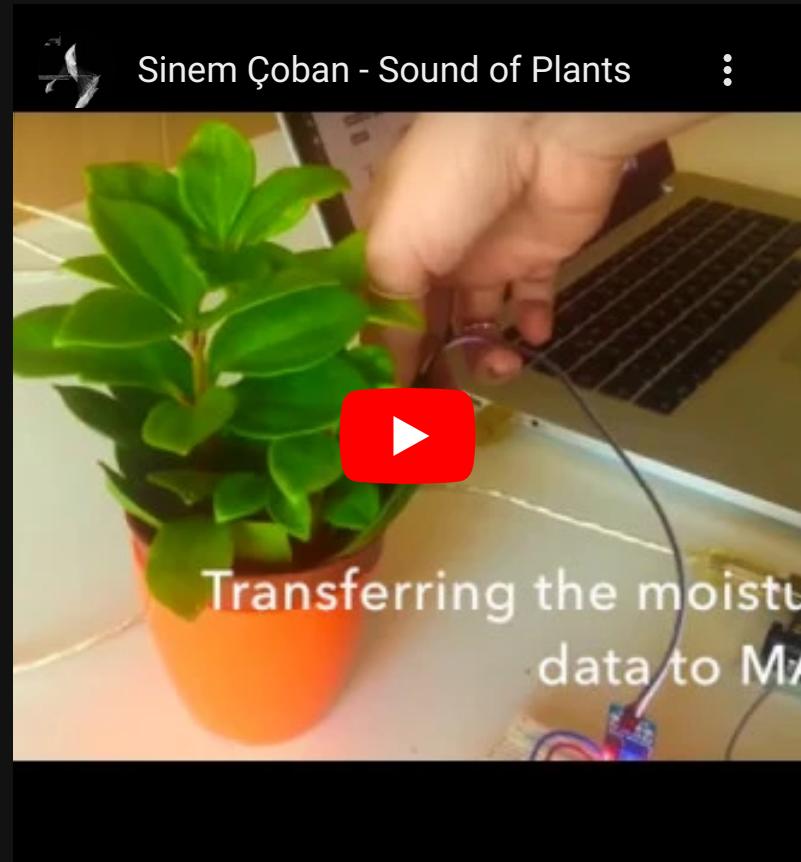
Advergames

Advergame:RAWS by Yousof Hamed



Co-starring LORRAINE GARY • MURRAY HAMILTON • A ZANUCK/BROWN PRODUCTION
Screenplay by PETER BENCHLEY and CARL GOTTLIEB • Based on the novel by PETER BENCHLEY • Music by JOHN WILLIAMS
Directed by STEVEN SPIELBERG • Produced by RICHARD D. ZANUCK and DAVID BROWN • A UNIVERSAL PICTURE •
TECHNICOLOR® PANAVISION® **PG** PARENTAL GUIDANCE SUGGESTED
SOME MATERIAL MAY NOT BE
APPROPRIATE FOR PRE-TEENAGERS **PG** ORIGINAL SOUNDTRACK AVAILABLE ON MCA RECORDS & TAPES
...MAY BE TOO INTENSE FOR YOUNGER CHILDREN

Physical Computing



Experimental UI



Project of The Week

Out of All Things one, and out of one all things

A great master piece that shows the blending of art and technology can be possible in a unique way.

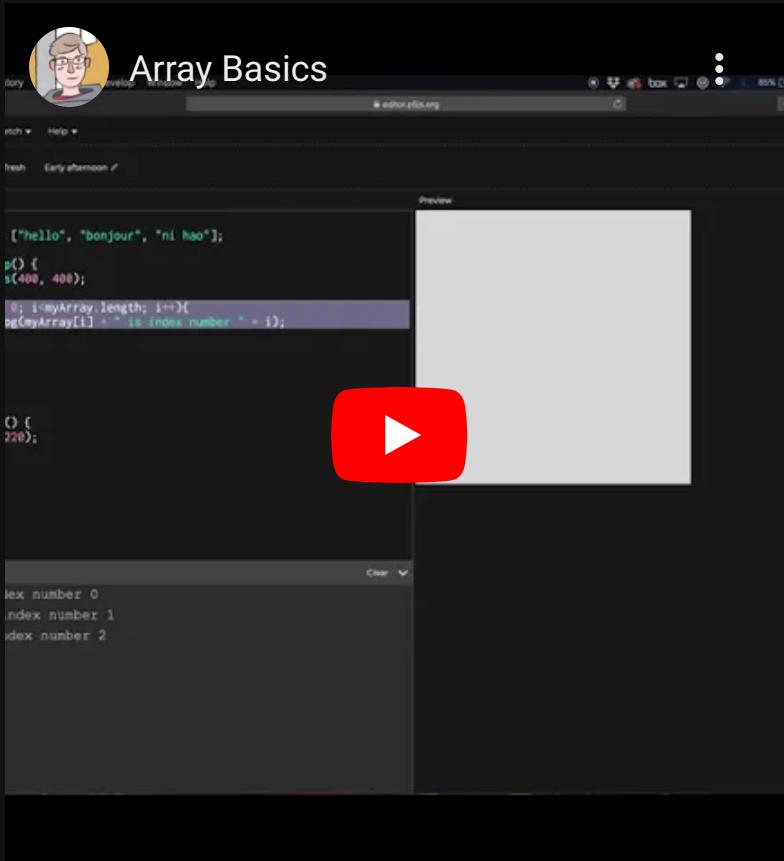
Out of all things one, and out of one all things Paylaş

The image displays three frames of a digital artwork. The first frame shows a complex, colorful pattern of overlapping, curved lines in shades of blue, green, and red. The second frame shows a similar pattern but with more yellow and green tones, and a prominent central star-like shape. The third frame shows a dense, intricate pattern of pink, purple, and blue lines radiating from a central point. Each frame has a small number (1, 2, or 3) in the top left corner and a small circular icon in the bottom right corner.

Assignments

1.  Keep your eyes open. Choose a thing. Lets say your favourite cup at your home, or a specific bird that you hear everyday, or your pet, or a tree at the campus.
2. As we did in previous semester, break it apart using CT principles. Redraw it using p5JS.
3. Make it parametric. So whenever you run the app, determine its properties randomly.
4.  Upload the sketch to your openProcessing account.
5.  Submit the openprocessing link.
6.  Submit the sketch source code as zip file as well.
7.  Read [Delusions of Dialogue: Control and Choice in Interactive Art](#)
8.  Watch the videos in the presentation. [Read about arrays](#)

Tutorials: Arrays

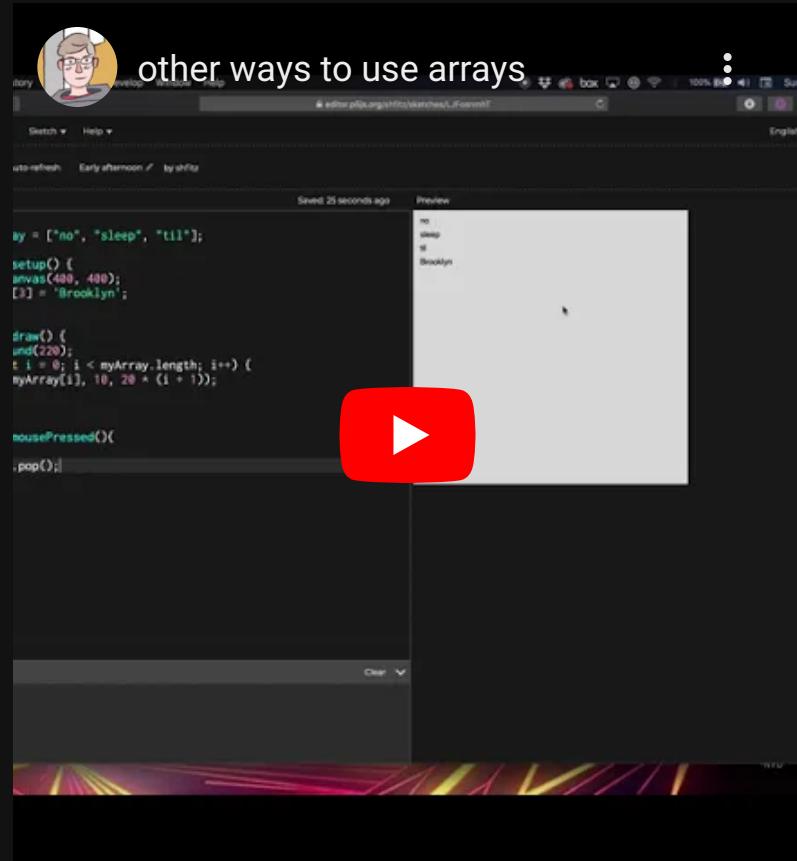


Array Basics

```
["Hello", "bonjour", "ni hao"];
p() {
  s(400, 400);
  for (int i=0; i<myArray.length; i++){
    myArray[i] += " index number " + i;
  }
}

```

index number 0
index number 1
index number 2



other ways to use arrays

```
my = ["no", "sleep", "til"];
setup() {
  size(400, 400);
  my[3] = 'Brooklyn';
}

draw() {
  textSize(20);
  for (int i = 0; i < my.length; i++) {
    myArray[i], 10, 20 * (i + 1));
  }
}

mousePressed(){
  .pop();
}
```