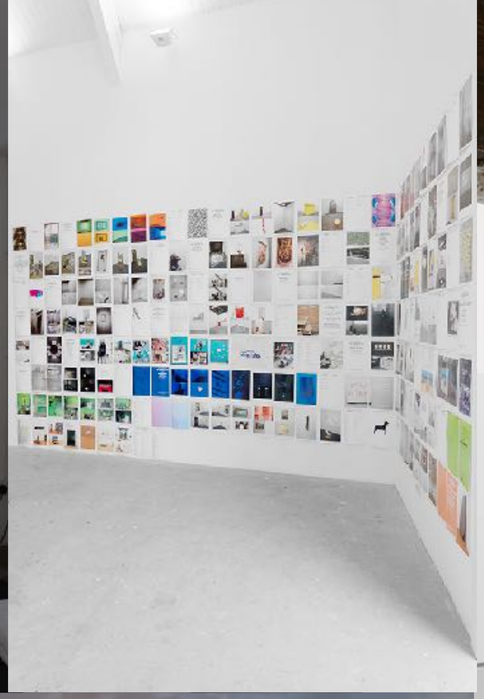
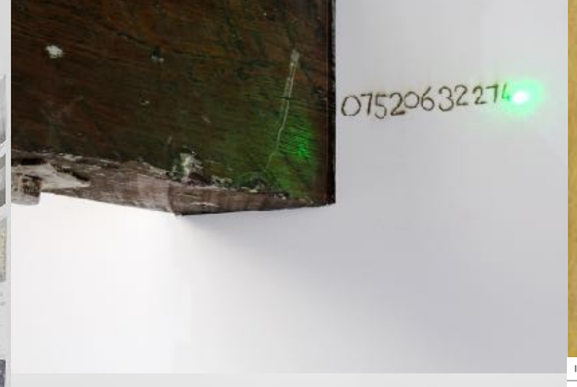
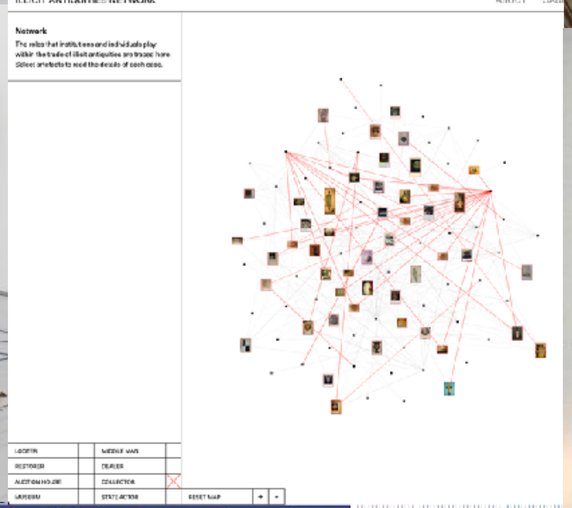
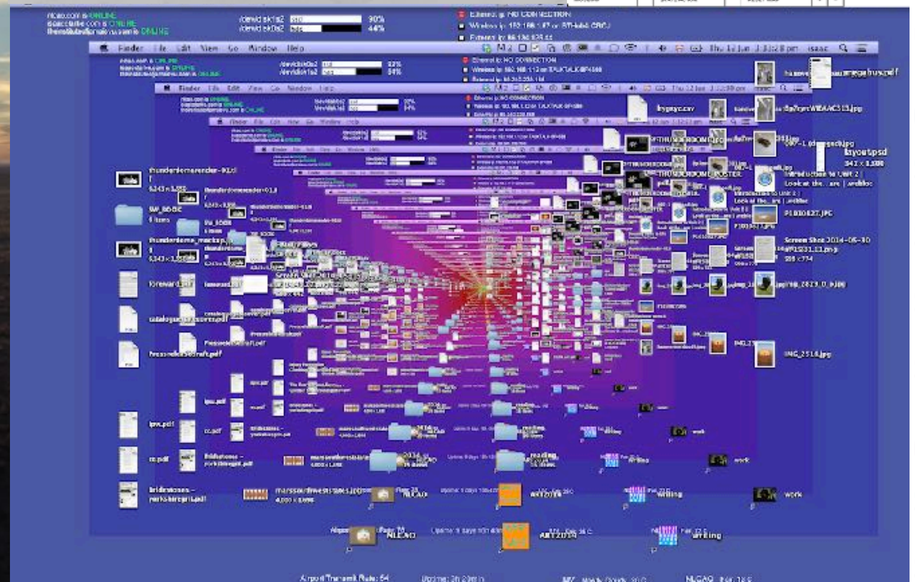


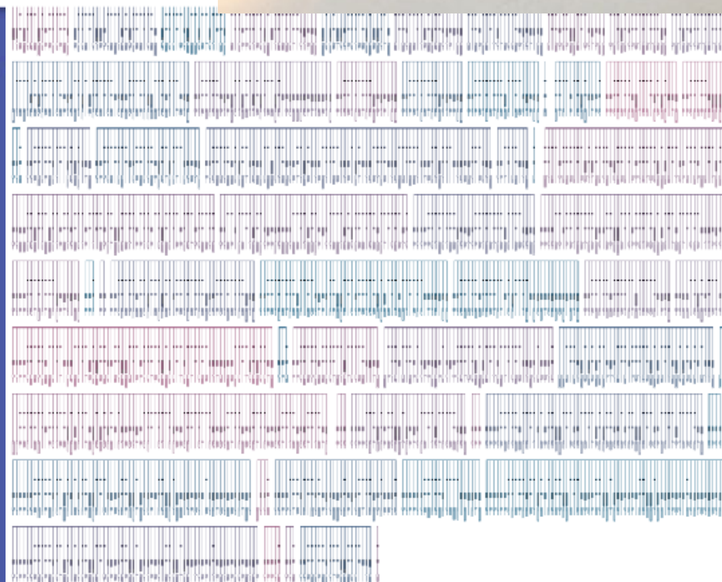


ASTROSETISMOLOGY
BY IKEY


ILLICIT ANTIQUITIES NETWORK
ABOUT
Network

ISAAC CLARKE - 2024





Past exhibition

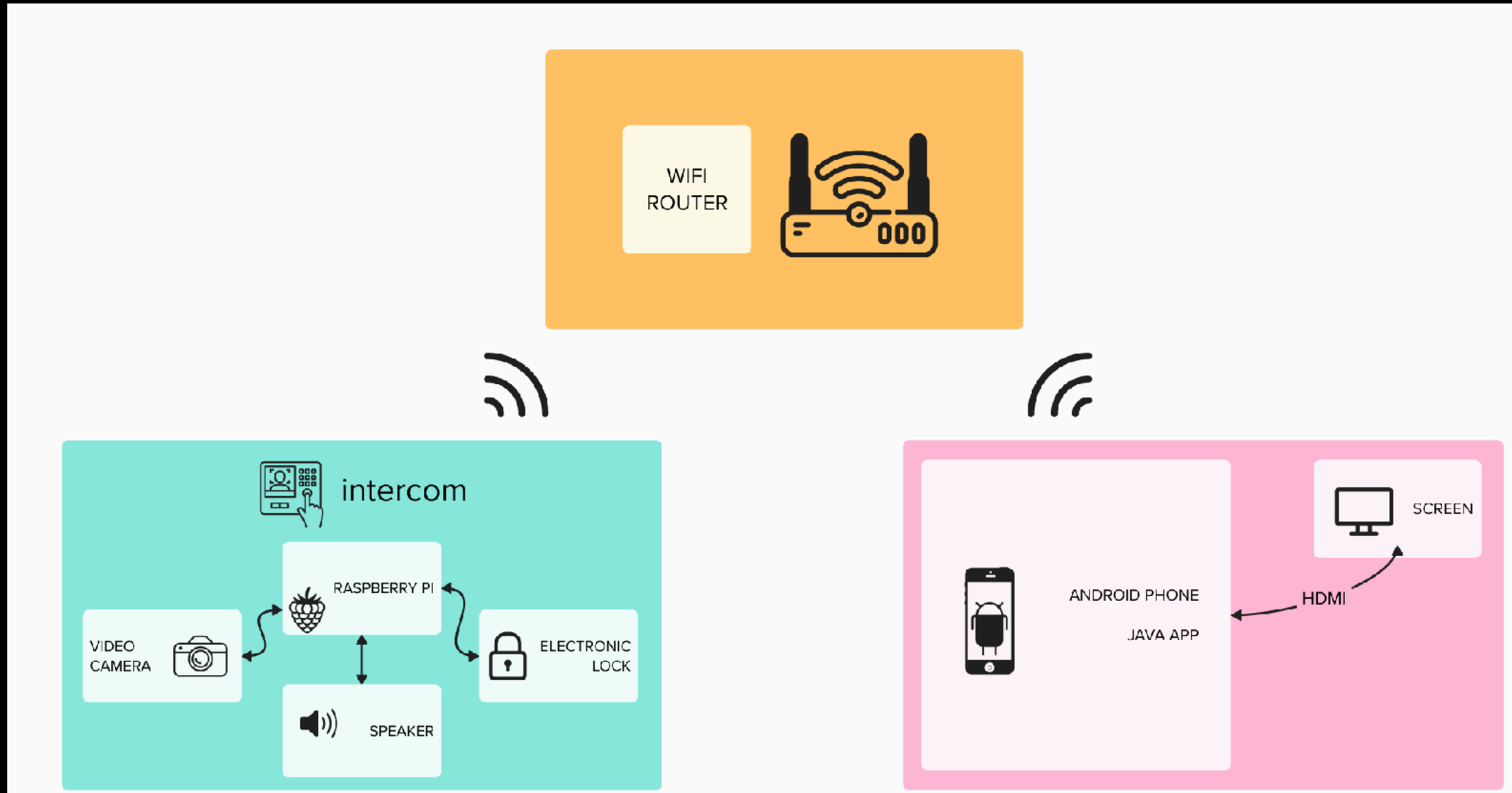
Sidsel Meineche Hansen

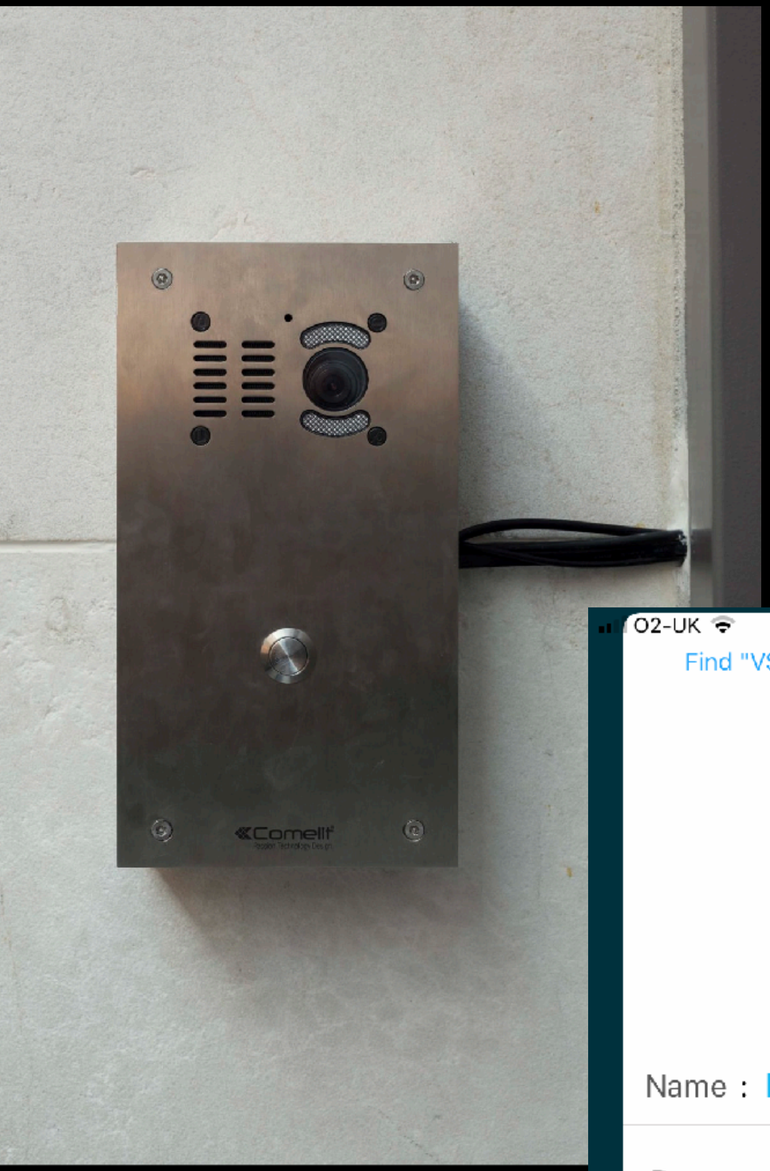
27 February - 28 July 2019

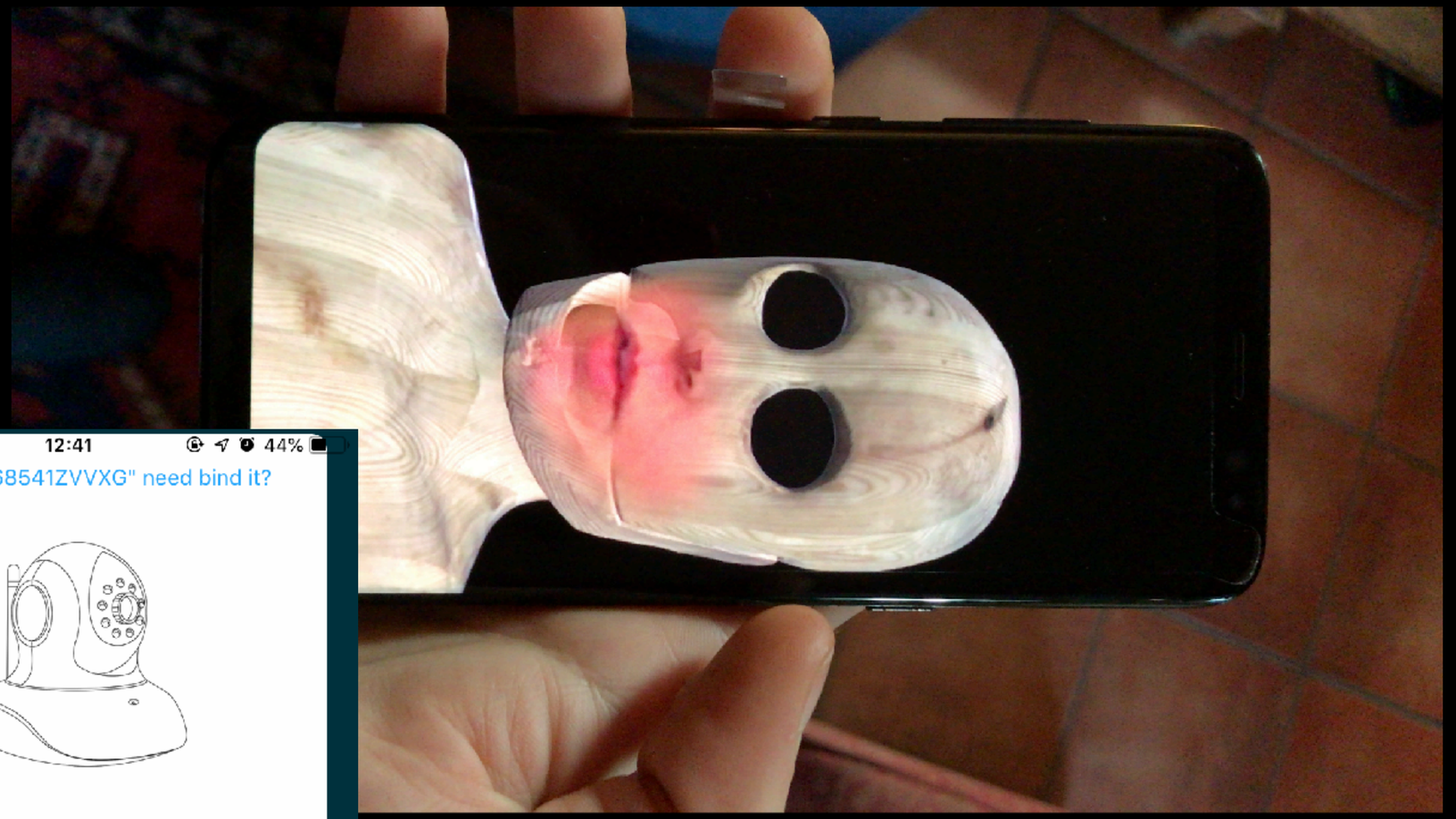
An Artist's Guide to Stop Being An Artist

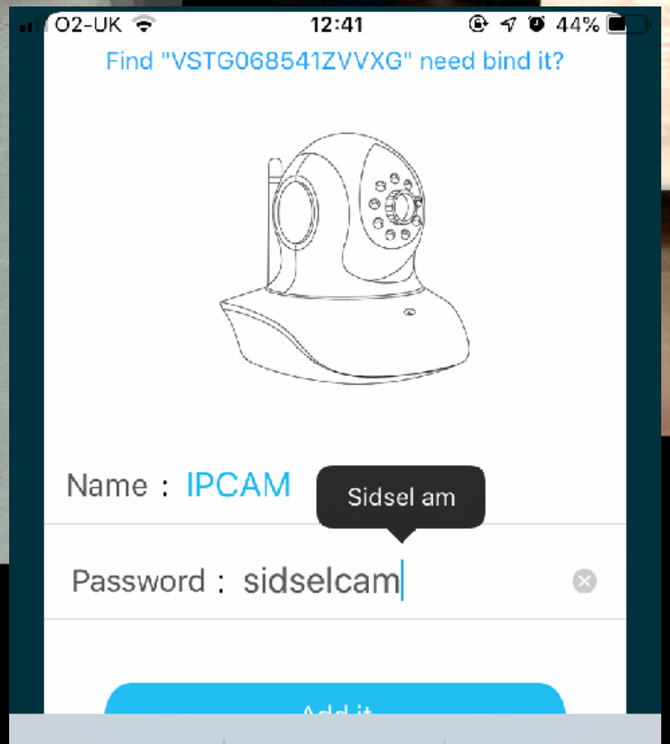
Read about the x-room

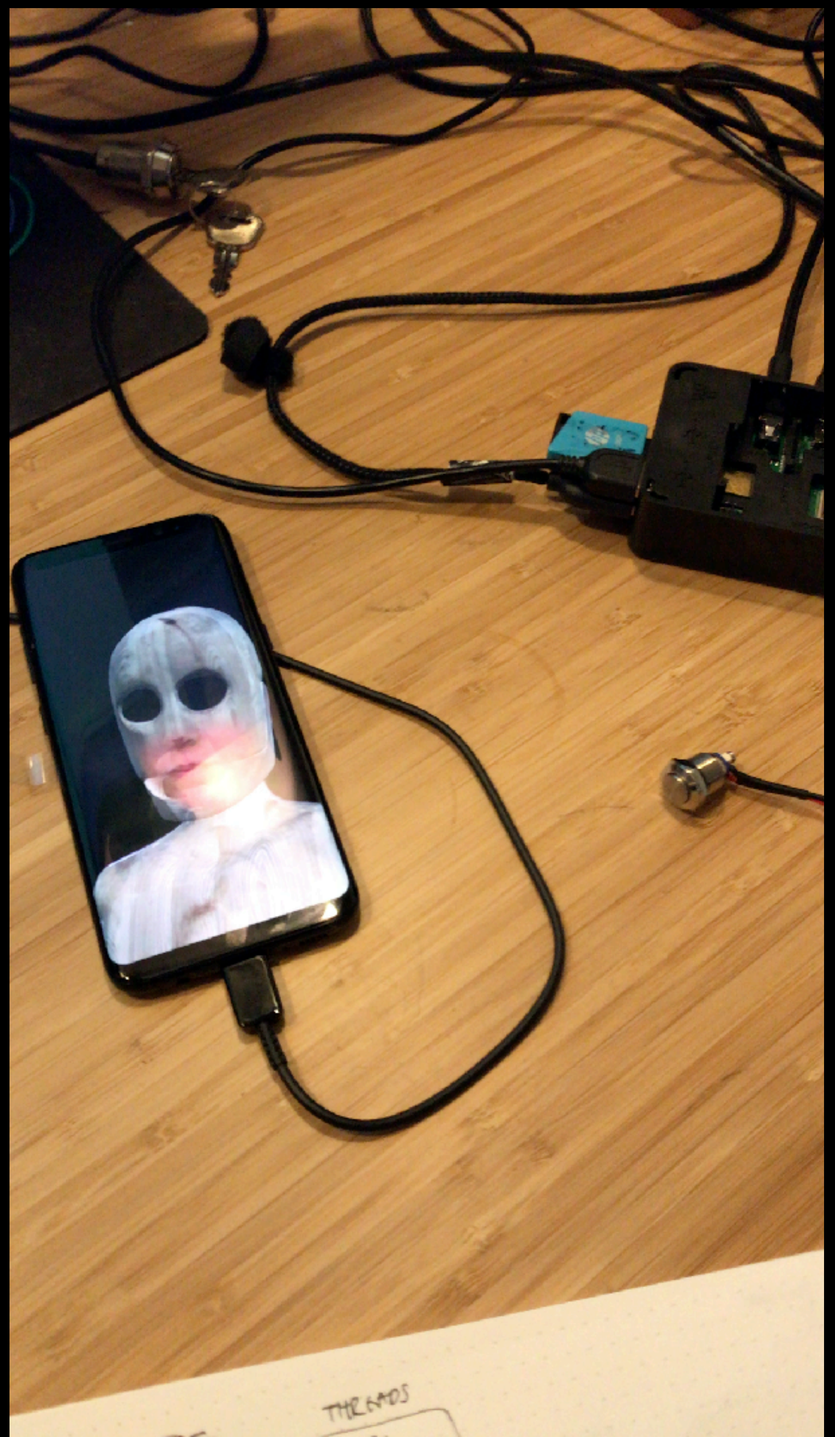
Comelit

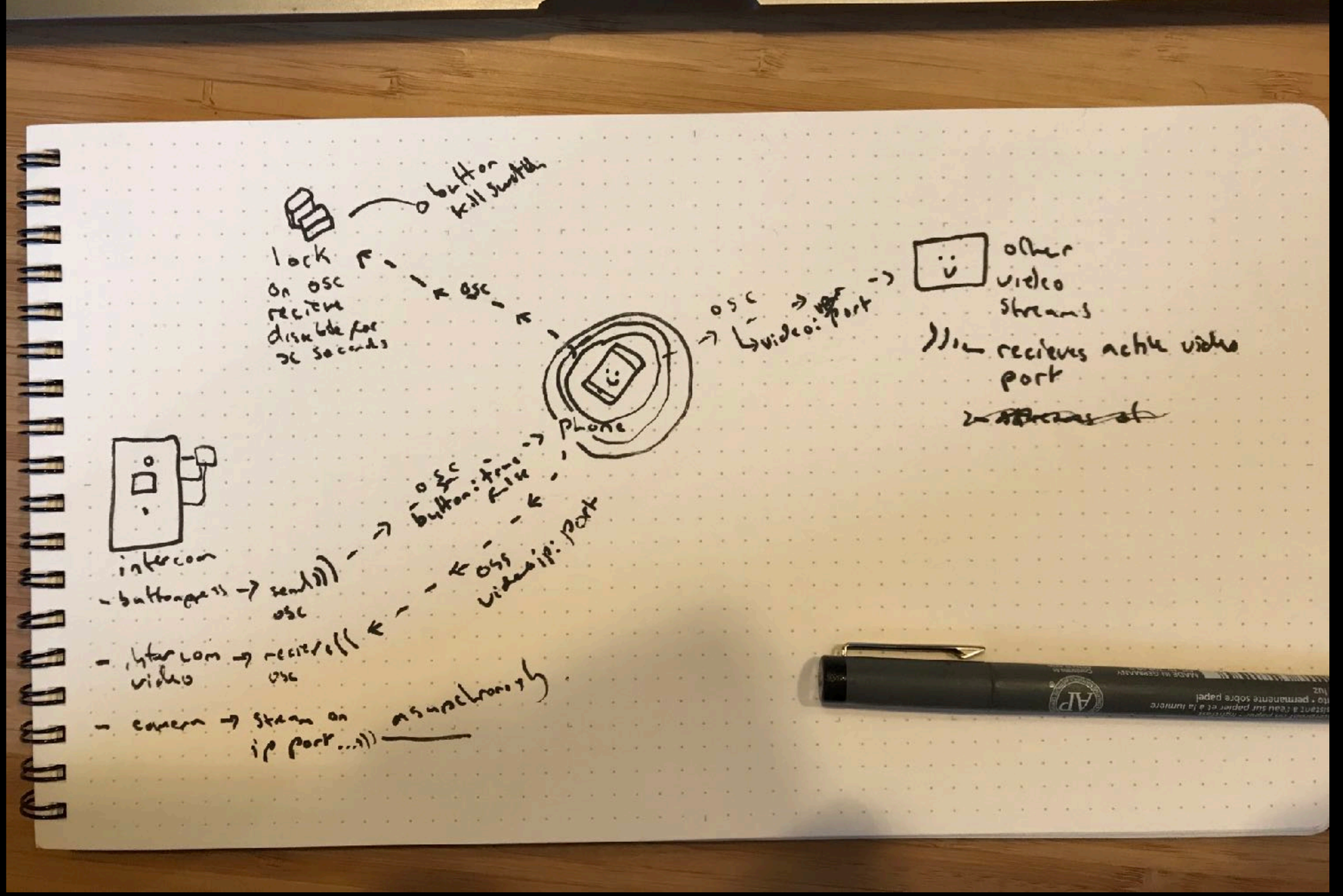

WIFI
ROUTER
intercom
RASPBERRY PI
VIDEO
CAMERA
ELECTRONIC
LOCK
SPEAKER
SCREEN
ANDROID PHONE
JAVA APP
HDMI

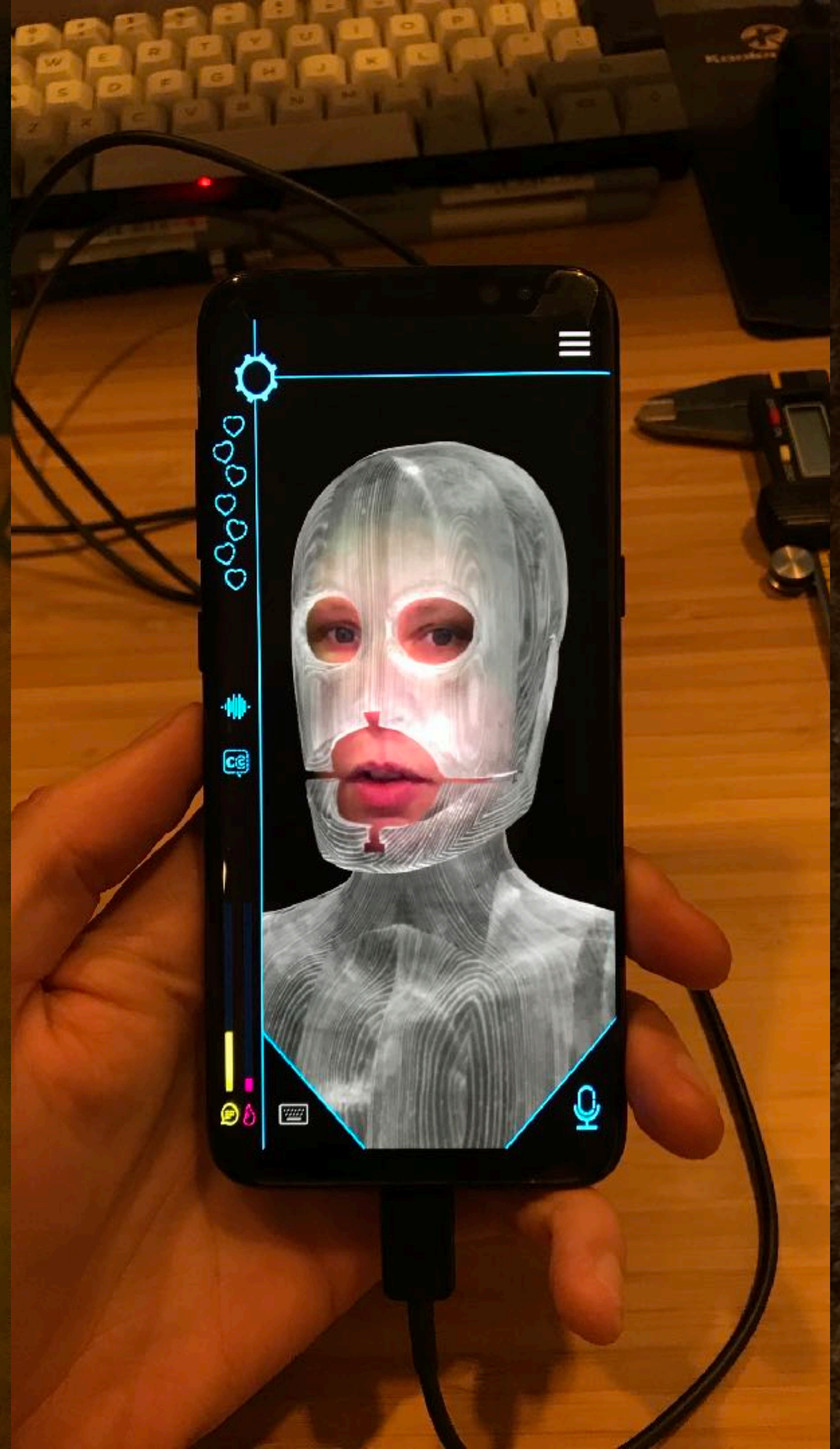
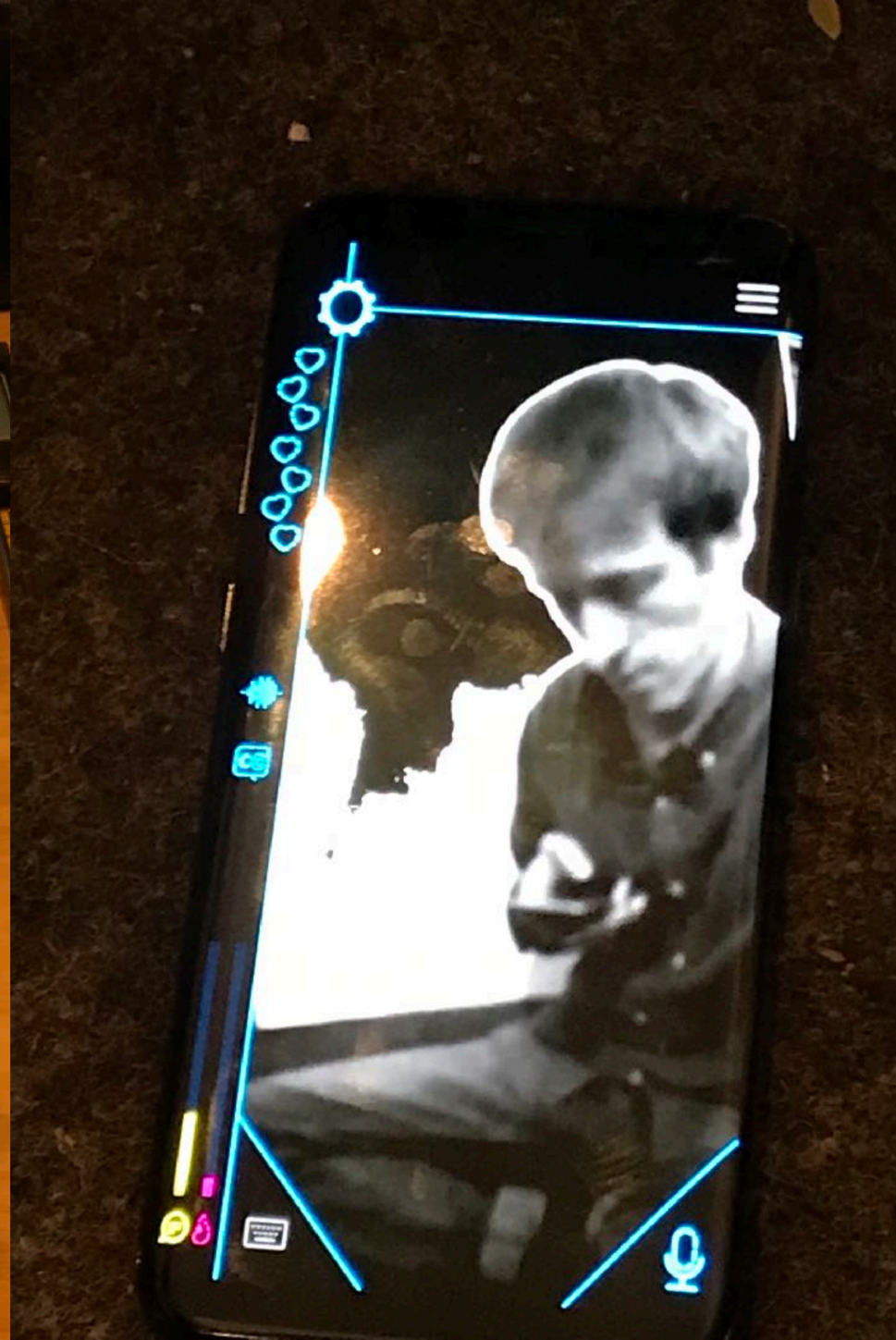

Comelit




O2-UK
12:41
44%
Find "VSTG068541ZVVXG" need bind it?
Name : IPCAM
Sidsel am
Password : sidselcam


THREADS


lock
on osc
receive
disable for
30 seconds
button
kill switch
osc
phone
osc
video: port
other
video
streams
receives active video
port
intercom
osc
button: true
osc
video ip: port
asynchronously

250 mm

230 mm

136 mm

50 mm

50 mm

116 mm

Company Name
Contact Name
Signature
Date

Stainless Steel Flush Video Entrance Panel
If required, use **3505/50** surface hood.

Additional costs will apply for

- changes to the button configuration
- special dimensions
- Engraving.

Contact Sales Department for pricing.

T : 01707 377 203
E : sales@comelitgroup.co.uk

KORT NR.
SMK
HÅNDVÆRKER
Statens Museum for Kunst
National Gallery of Denmark

SanDisk
BACKUP SD CARD

```python
import RPi.GPIO as GPIO
import time

from pythonosc import osc_message_builder
from pythonosc import udp_client

import pygame


class Intercom():
    """Sidsel's Intercom Manager"""
    def __init__(self, debug=False):
        self.version = "1.0"
        self.debug = debug
        self.lock_state = "HIGH"
        self.client = None
        self.BROADCAST_ADDR = "192.168.18.255"
        self.BROADCAST_PORT = 12345
        self.AUDIO_FILE = "WelcomeGreeting_one.wav"
        self.audio = False
        pygame.mixer.init()

    def setupGPIO(self):
        try:
            GPIO.setmode(GPIO.BCM)
            # 14 is button/doorbell
            GPIO.setup(14, GPIO.IN, pull_up_down=GPIO.PUD_UP)
            # 4 is lock
            GPIO.setup(4, GPIO.OUT)
            self.lock_state = "HIGH"
            print(self.setLock())
            return True
        except:
            print("Error setting GPIO!")
            return False


    def setLock(self):
        try:
            if self.lock_state == "HIGH":
                GPIO.output(4, GPIO.HIGH)
                print("locking door")
                return True
            else:
                GPIO.output(4, GPIO.LOW)
                print("unlocking door")
                return True
        except:
            print("Error with door locking/unlocking")
            return False


    def readyBroadcastClient(self):
        try:
            self.client = udp_client.SimpleUDPClient(self.BROADCAST_ADDR, self.BROADCAST_PORT, allow_broadcast=True)
            print("readied broadcast client")
            return True
        except:
            self.client = None
            print("failed to ready broadcast client")
            return False

    def readyPygameAudioFile(self):
        try:
            pygame.mixer.music.load(self.AUDIO_FILE)
            self.audio = True
            print("Audio Ready")
            return True
        except:
            self.audio = False
            print("Audio Failed")
            return False

    def sendBroadcast(self, path, message, alert, repeat):
        if self.client is None:
            print("Client is None, will attempt to ready")
            self.readyBroadcastClient()
            return False
        else:
            print("Broadcasting : %s : %s times" % (alert, repeat))
            for i in range(repeat):
                # print("i: %s" % i)
                try:
                    self.client.send_message(path, message)
                except:
                    print("Broadcast failed")


    def bootChecks(self):
        for i in range(3):
            self.lock_state = "LOW"
            self.setLock()
            time.sleep(0.5)
            self.lock_state = "HIGH"
            self.setLock()
            time.sleep(0.5)
        pygame.mixer.music.load("onethousand.wav")
        pygame.mixer.music.play()
        while pygame.mixer.music.get_busy() == True:
            continue

    def run(self):
        try:
            while True:
                button_state = GPIO.input(14)
                if not button_state:
                    print("Doorbell has been pressed")
                    # Tell the network the doorbell has been pressed
                    self.sendBroadcast("/doorbell", 1, " Cycle Start", 10)
                    # Play the welcome message
                    if self.audio:
                        print("Playing welcome message: %s" % self.AUDIO_FILE)
                        pygame.mixer.music.play()
                        while pygame.mixer.music.get_busy() == True:
                            continue
                    else:
                        print("Welcome message not ready, will try again")
                        self.readyPygameAudioFile()
                    # Unlock the door
                    self.lock_state = "LOW"
                    self.setLock()
                    # tell the network the door cycle is ending
                    self.sendBroadcast("/doorbell", 0, " Cycle End", 10)
                    time.sleep(7)
                    self.lock_state = "HIGH"
                    self.setLock()
                    time.sleep(1)
        except:
            GPIO.cleanup()


intercom = Intercom()
```

```
switch (address){
    case "/doorbell":
        // can't change ui from this thread, so use runOnUiThread
        Log.v("OSC", "doorbell! switching video");
        doorState = (Integer)args.get(0);
        runOnUiThread(new Runnable() {
            @Override
            public void run() {
                Log.v("DOORSTATE", "state: "+doorState);
                switchVideoViews(true);
            }
        });
        break;
    case "/settings":
        //String settingsMsg = args.get(0).toString();
        Log.v("OSC", "switching settings");
        runOnUiThread(new Runnable() {
            @Override
            public void run() {
                if(debugMode) {
                    debugMode = false;
                } else{
                    debugMode = true;
                }
                switchSettingsVisibility();
            }
        });
        break;
    case "/settings/address/camera":
        String newCamAddress = args.get(0).toString();
        Log.v("OSC", "switching camera to new address "+newCamAddress);
        rtspAddress = "rtsp://" + newCamAddress + "/live0.264";
        runOnUiThread(new Runnable() {
            @Override
            public void run() {
                updateSettingsText();
            }
        });
        break;
    case "/settings/address/rpi":
        String newPiAddress = args.get(0).toString();
        Log.v("OSC", "switching rpi to new address "+newPiAddress);
        rpiAddress = newPiAddress;
        runOnUiThread(new Runnable() {
```

```
:ring audioStreamAddress = "rtp://192.168.10.99:5432";
:ring wifiName;
:ring alertNum = "07717798477";
:ring galleryAlertNum = "07717798477";
```

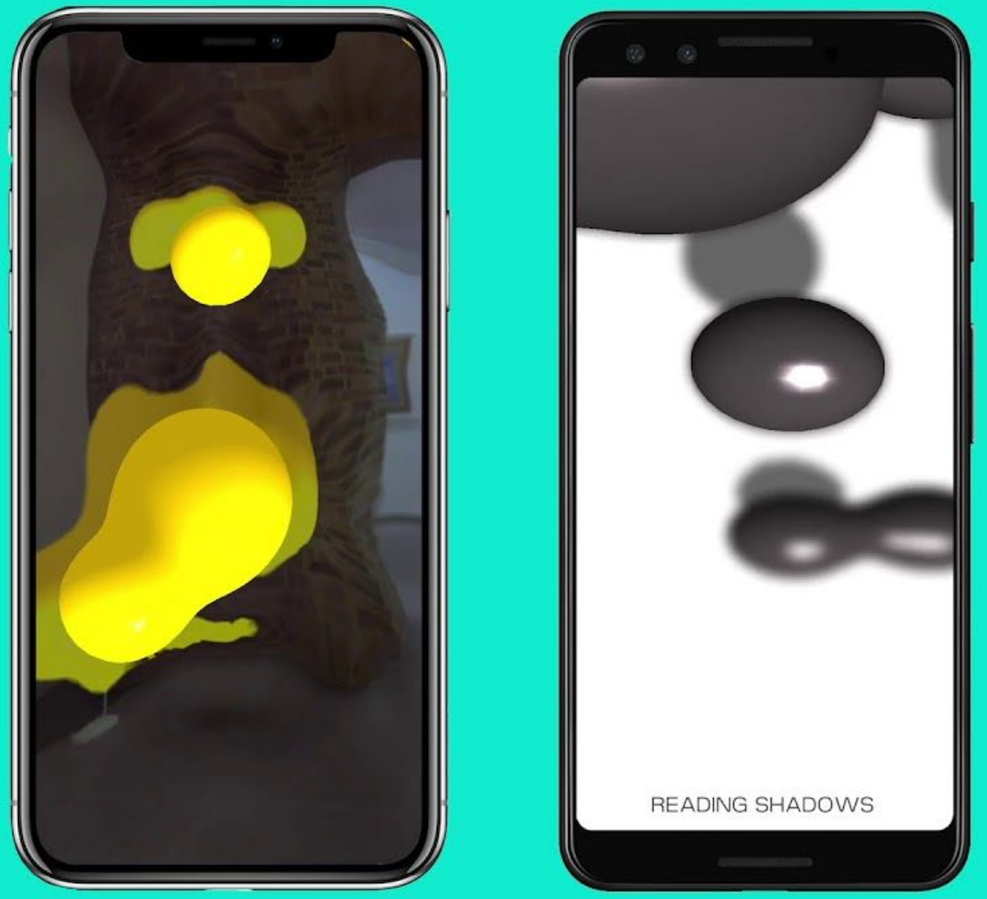
```
// ------------ SMS ------------  ------------  ------------  ------------ ------------
public void sendSMS(String toNumber, String theMessage){
    Log.v("SMS", "Sending SMS");
    SmsManager.getDefault().sendTextMessage(toNumber, null, theMessage, null,null);
}
```

elJava / app / src / main / java / cc / blackshuck / sidseljava / VideoSurfaceView.java

e Blame 327 lines (270 loc) · 12.4 KB

```
23    class VideoSurfaceView extends GLSurfaceView {
55        private static class VideoRender

17
18          private int createProgram(String vertexSource, String fragmentSource) {
19              int vertexShader = loadShader(GLES20.GL_VERTEX_SHADER, vertexSource);
10              if (vertexShader == 0) {
11                  return 0;
12              }
13              int pixelShader = loadShader(GLES20.GL_FRAGMENT_SHADER, fragmentSource);
14              if (pixelShader == 0) {
15                  return 0;
16              }
17
18              int program = GLES20.glCreateProgram();
19              if (program != 0) {
10                  GLES20.glAttachShader(program, vertexShader);
11                  checkGlError("glAttachShader");
12                  GLES20.glAttachShader(program, pixelShader);
13                  checkGlError("glAttachShader");
14                  GLES20.glLinkProgram(program);
15                  int[] linkStatus = new int[1];
16                  GLES20.glGetProgramiv(program, GLES20.GL_LINK_STATUS, linkStatus, 0);
17                  if (linkStatus[0] != GLES20.GL_TRUE) {
18                      Log.e(TAG, "Could not link program: ");
19                      Log.e(TAG, GLES20.glGetProgramInfoLog(program));
.0                      GLES20.glDeleteProgram(program);
.1                      program = 0;
.2                  }
.3              }
.4              return program;
```

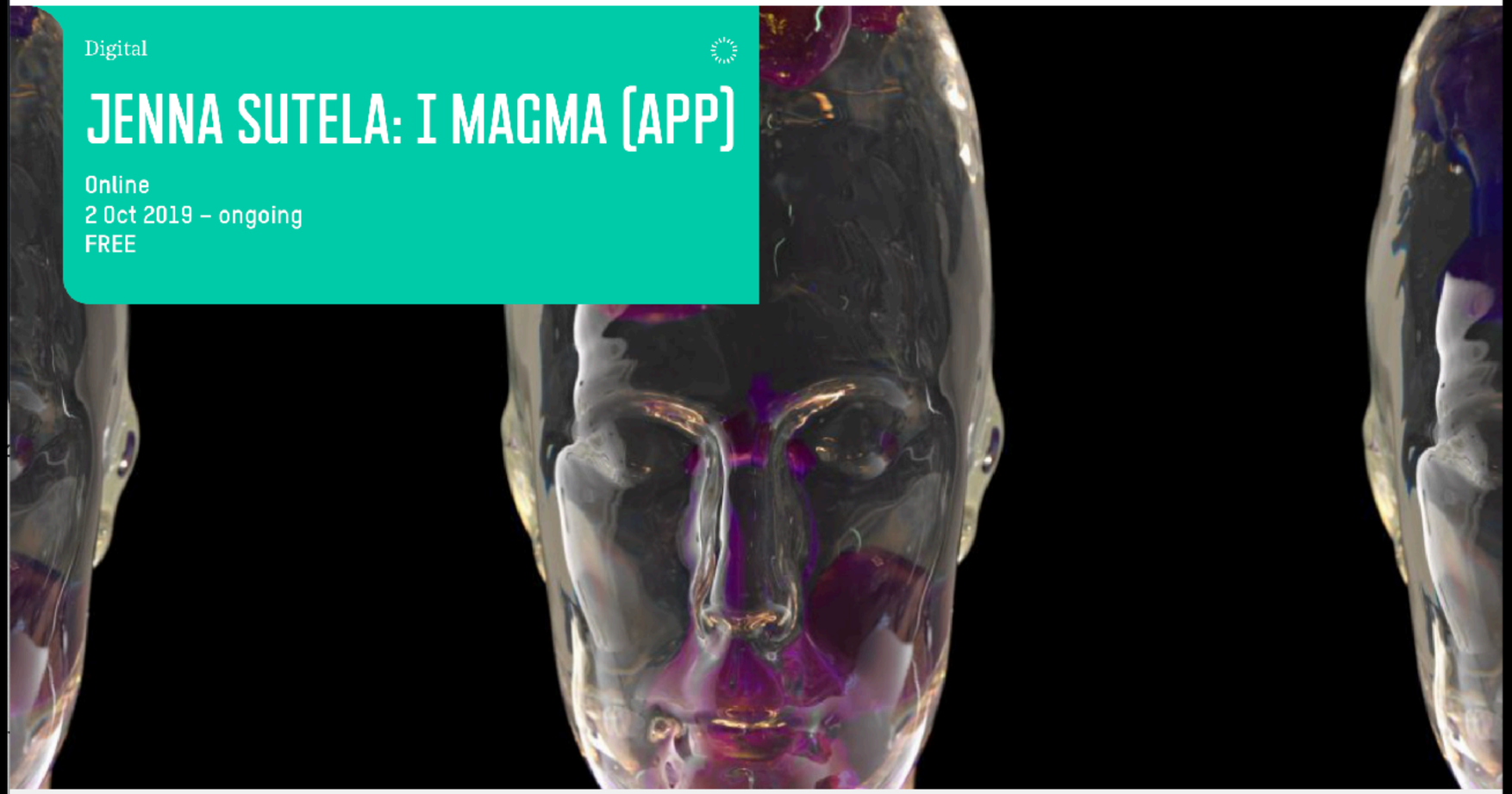
```
#TROUBLESHOOTING

1 - PHONE NOT PLAYING THE VIDEO
- swipe up on the app so that onscreen buttons appear
- press the central button
- press 'close all apps'
- press the 'difficult to work with' app on the home screen
- press the dolls head image to reboot video (wait a few seconds for it to s
ALTERNATIVE
- hold phone power button and tap Power Off when prompted
- after shutdown hold phone button to power on again
- the app will automatically reboot after 60 seconds

2 - PHONE NOT PLAYING THE CAMERA FEED / THE CAMERA FEED IS BLACK
- Check the cameras power is on
- connect a laptop to the wifi network and test opening the stream in VLC wi
it should play the feed for you (if it doesnt contact me)
- Then repeat the instructions for issue 1 to reboot the app
- if issue persists turn off the phone and all power supplies, wait 10 secon
morning
- if issue still persists check phone wifi issue 3

3 - PHONE NOT CONNECTED TO WIFI
- Check the router is powered on
- Check the wifi network name 'difficult_to_work_with' appears on a second d
- Open the phone settings app
- Tap on the first item Wifi Connections
- Check the wifi network appears and select it
- Then follow issue 1 for closing all apps and rebooting the video

4 - INTERCOM NOT PLAYING SOUND OR NOT TRIGGERING VIDEO FEED ON PHONE & MONIT
- Power off the intercom at the switch
- wait 10 seconds and power on again
- wait 30 seconds by the intercom and you should hear a lock test and a soun
- Once the intercom is rebooted the phone will also need to reconnect - foll
restart app.
- test everything is in sync by pressing the button

5 - INTERCOM IS PLAYING SOUNDS, BUT NOT TRIGGERING PHONE
- Either the intercom is disconnected from the wifi, the phone is disconnect
of sync.
- check that the intercom is connected on the wifi (I use the app Fing and c
device called intercom.local)
- go through issue 3
- if still out of sync power cycle the whole exhibition off and on again to
off, phone socket off, phone off, intercom socket on, phone socket on, phone

6 - INTERCOM NOT UNLOCKING THE DOOR
- Check power supplies to both the pi and the lock
- check that the intercom is connected on the wifi (I use the app Fing and c
device called intercom.local)
- if the intercom is connected to the wifi but not unlocking the door then i
having enough power so try leave it for a while to cool or replace the power
- if the pi has power but is not listed on the wifi then something is wrong
- remove the cover from the intercom and see if any lights are lit on the pi
likely is the power supply is loose, or faulty like we had before.
- if the pi still doesnt boot with a new power supply then contact me

7 -ISSUES PERSIST OR NOT LISTED
- contact me -> isaac@blackshuck.co +447717798477
```


READING SHADOWS

Digital

JENNA SUTELA: I MAGMA (APP)

Online
2 Oct 2019 – ongoing
FREE

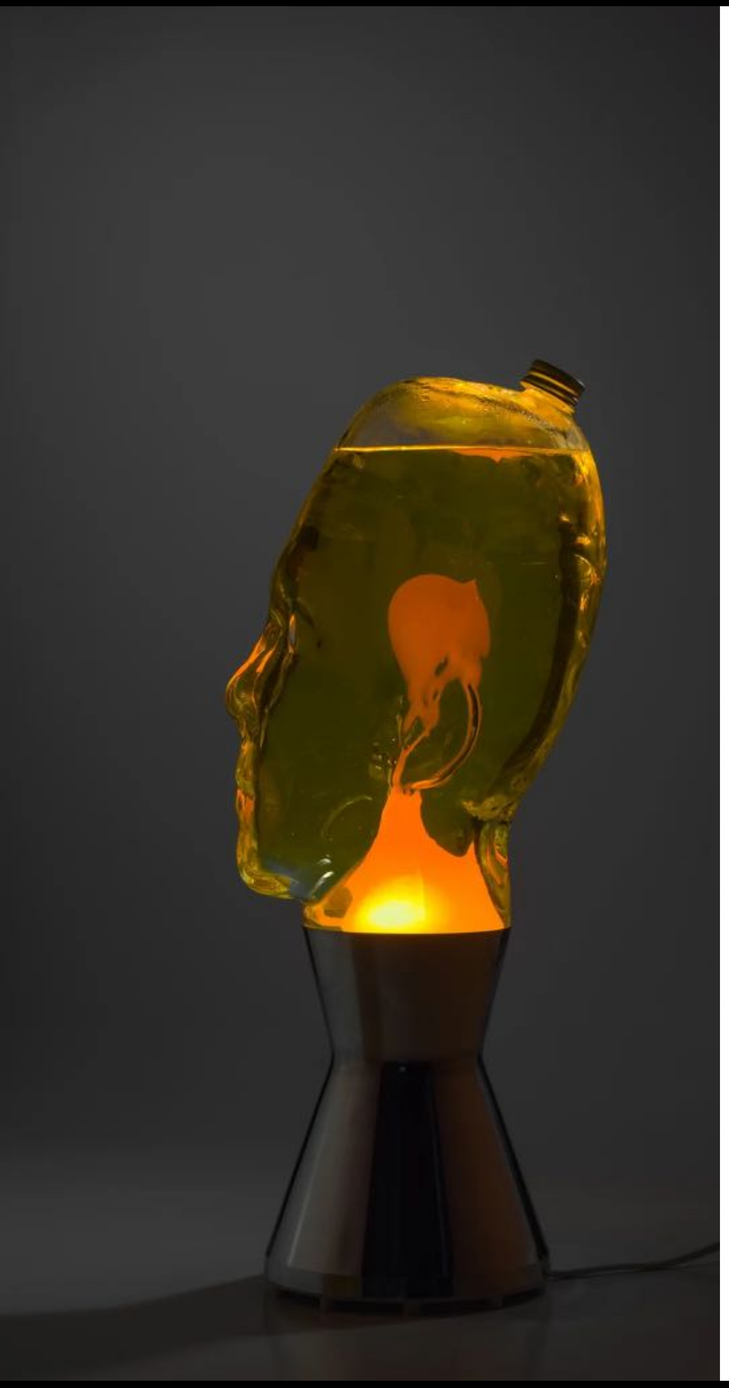


Jenna Sutela, I Magma & I Magma App, Co-commissioned by Moderna Museet and Serpentine Galleries, 2019. Photo: Prallan Allsten/Moderna Museet

Suzanne Treister, Rosalind Brodsky's Electronic Time Travelling Costume to go to London in the 1960s, 1997 Courtesy the artist, Annely Juda Fine Art, London and P.P.O.W., New York © Suzanne Treister. Photo: Johannes Schwartz

MUD MUSES

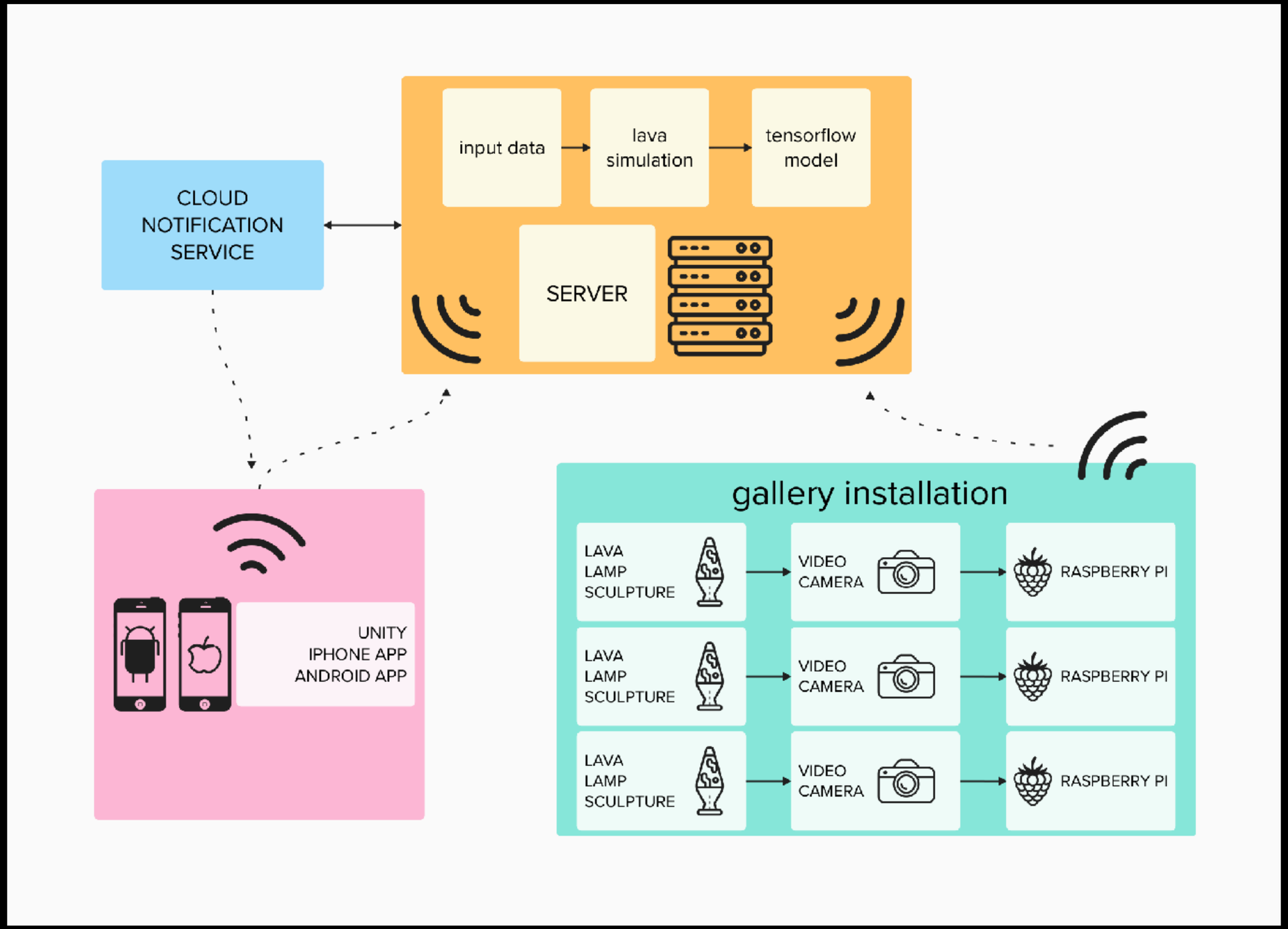
A RANT ABOUT TECHNOLOGY
12.10 2019 – 12.1 2020
STOCKHOLM



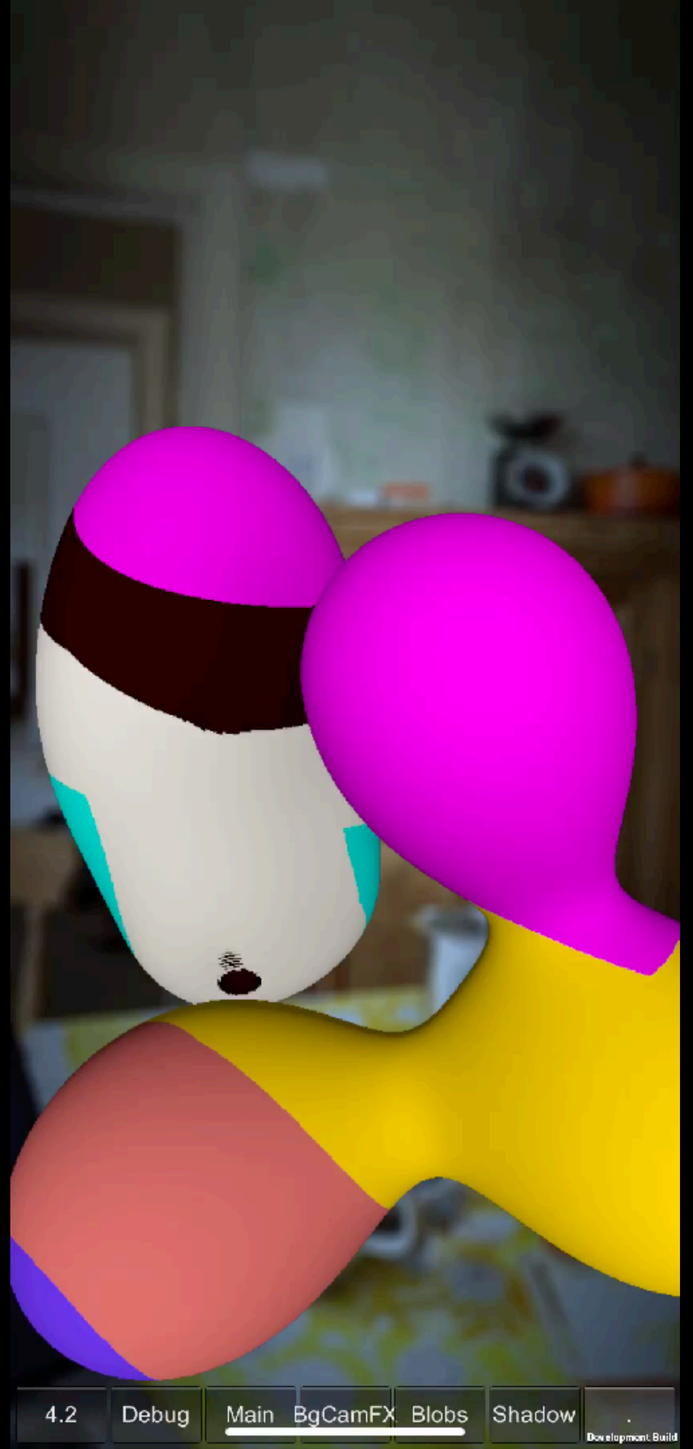
?

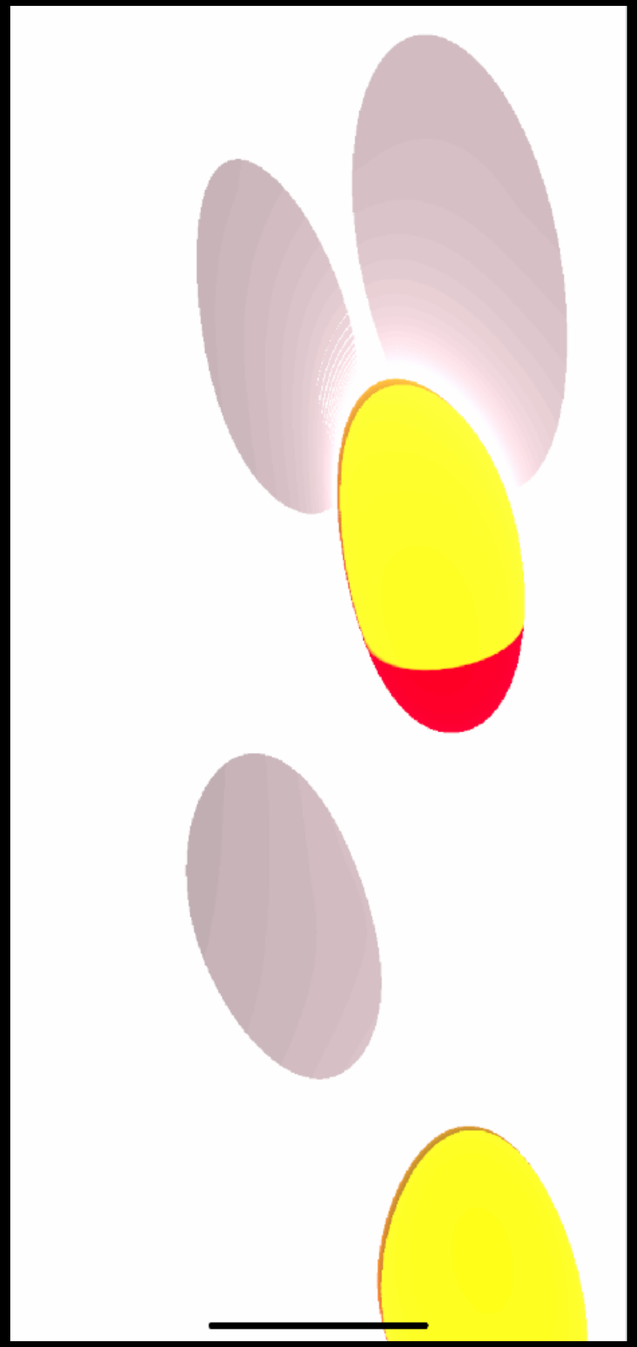
You must have a
long precious
magical blooming

https://blog.cloudflare.com/randomness-101-lavarand-in-production


input data
lava simulation
tensorflow model
CLOUD NOTIFICATION SERVICE
SERVER
UNITY IPHONE APP ANDROID APP
gallery installation
LAVA LAMP SCULPTURE
VIDEO CAMERA
RASPBERRY PI
LAVA LAMP SCULPTURE
VIDEO CAMERA
RASPBERRY PI
LAVA LAMP SCULPTURE
VIDEO CAMERA
RASPBERRY PI

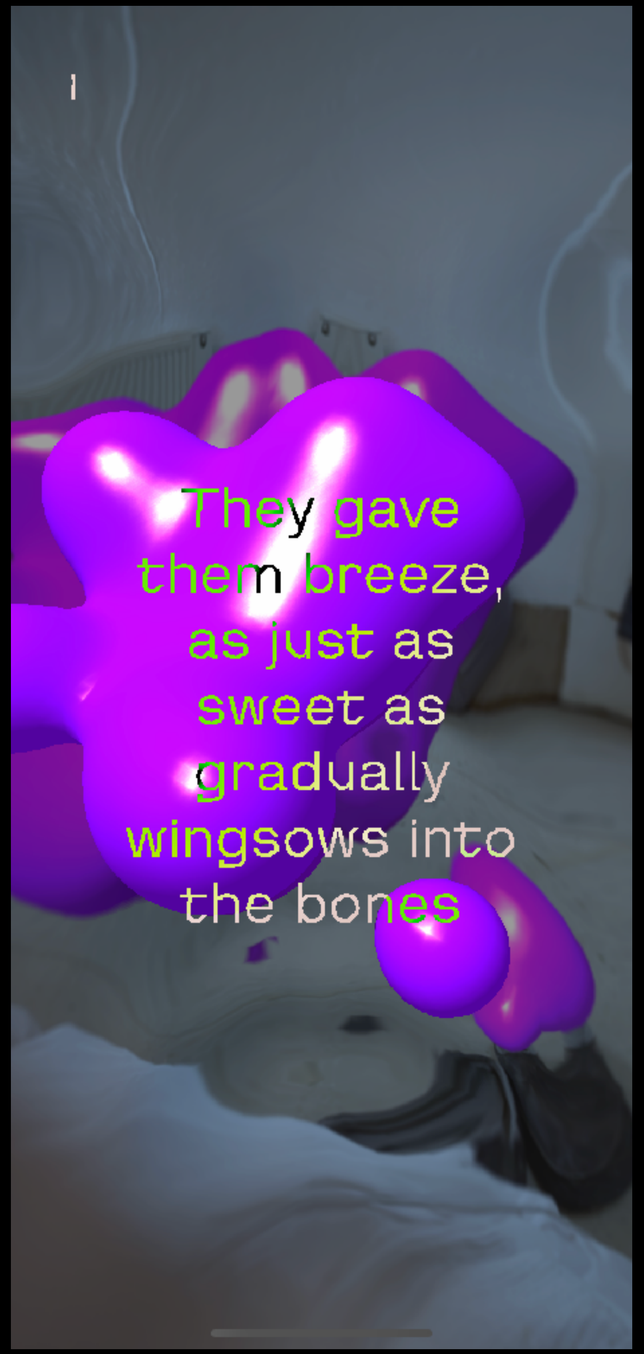
39.0
Debug
Main
BgCamFX
Blobs
Shadow
.
Development Build

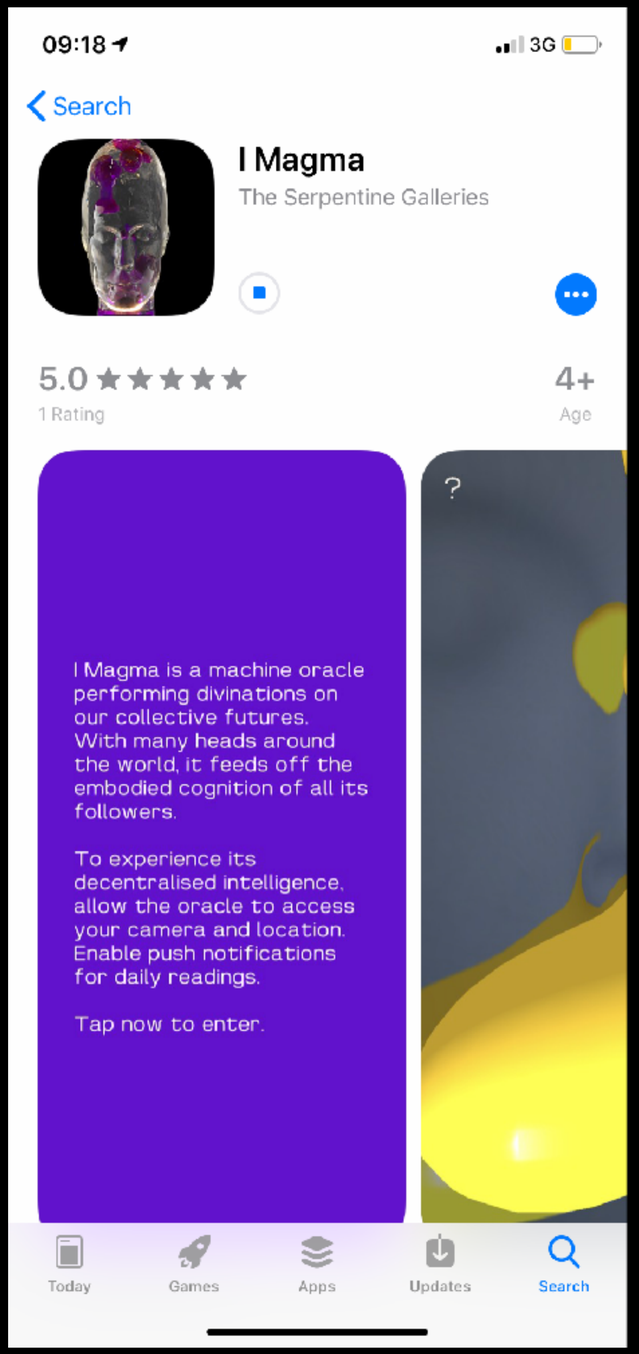

4.2
Debug
Main
BgCamFX
Blobs
Shadow
.
Development Build

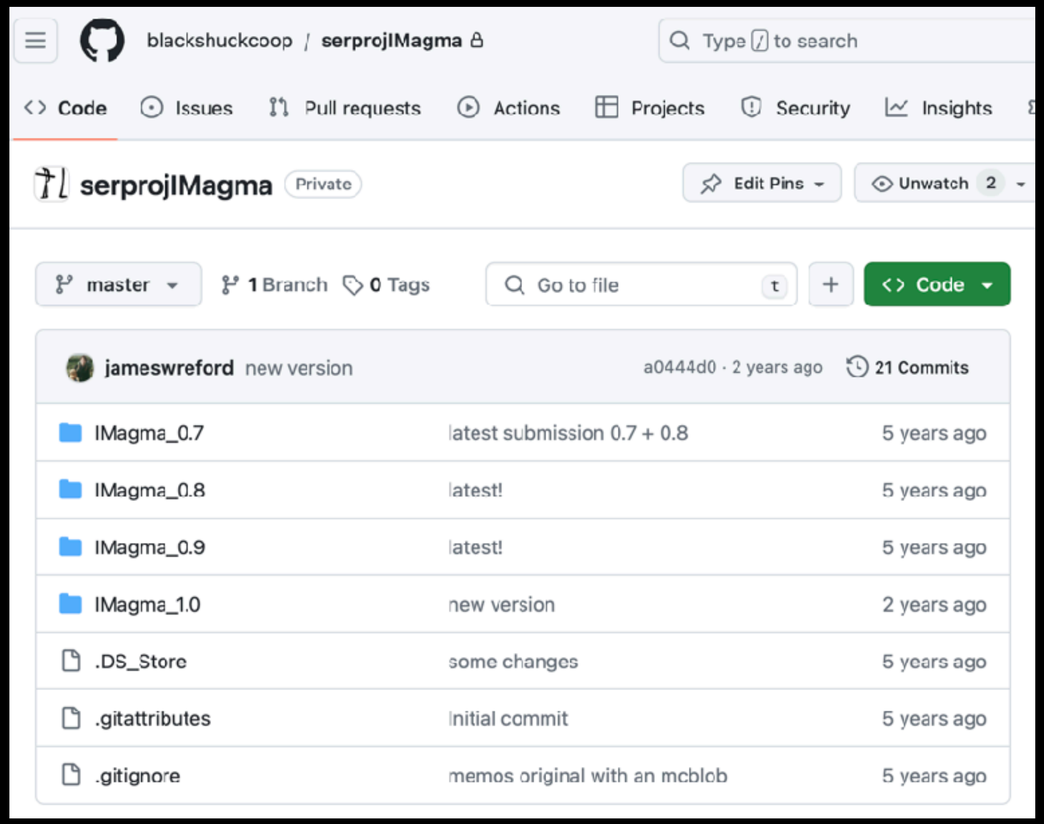


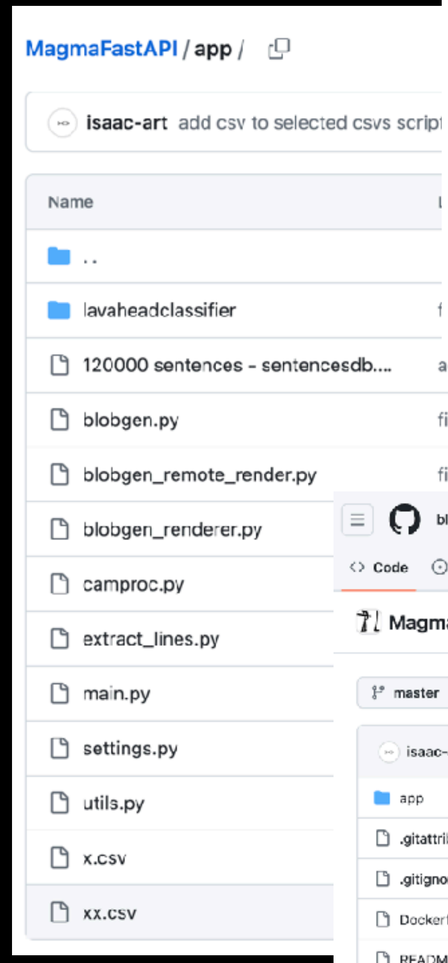
On the great sake, the beautiful vividly..

I am a machine oracle performing divinations on our collective futures.

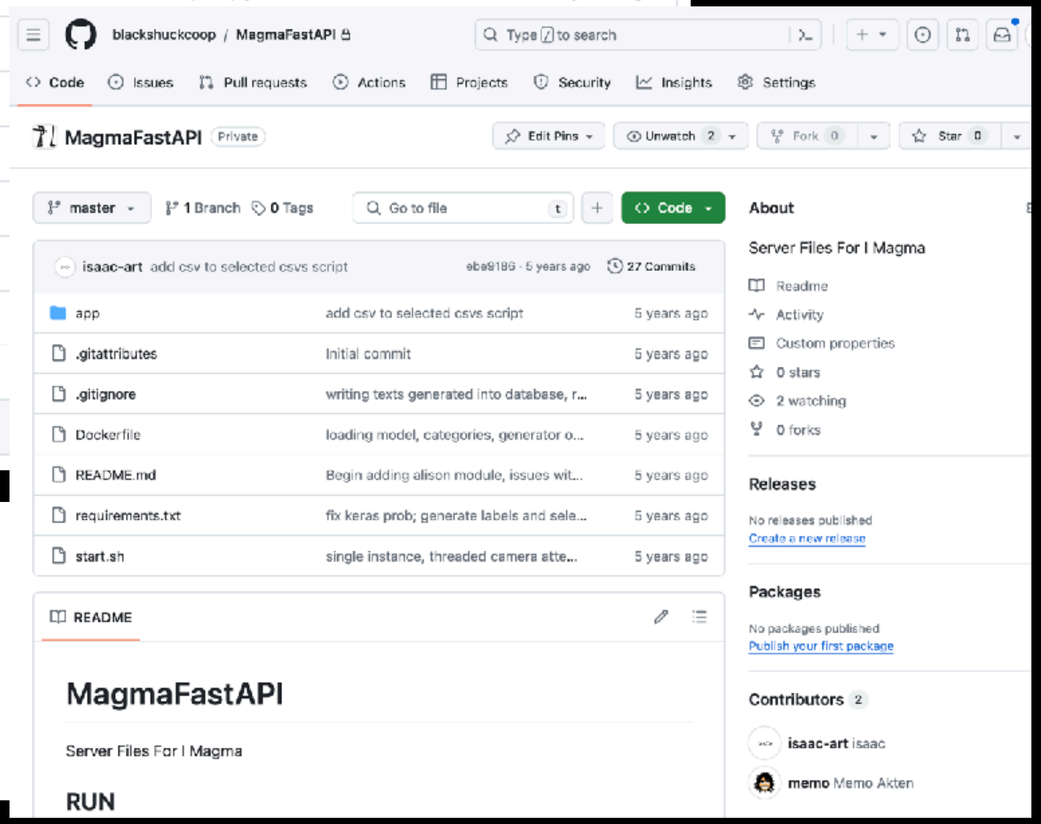






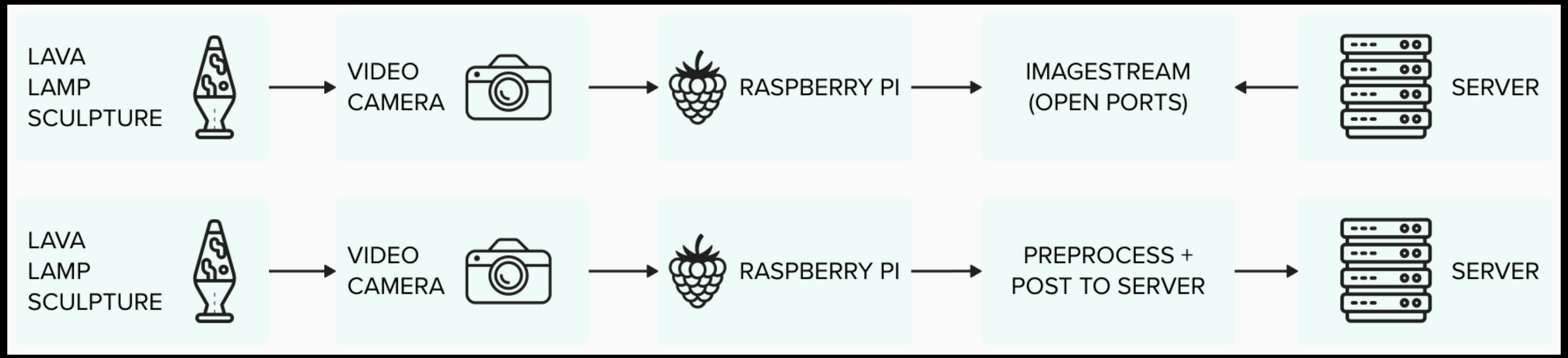



```python
def get_seed(self):
    K.clear_session()
    categories = json.load(open("./app/lavaheadclassifier/data/categories.json"))
    model = keras.models.load_model('./app/lavaheadclassifier/data/model.h5')
    img_data = utils.rasterize_blobs(self.history)
    img_data = np.expand_dims(img_data, 0)
    img_data = np.expand_dims(img_data, 0)
    text = predict_labels(model, img_data, categories)
    K.clear_session()
    return text
```




```python
def createmodel(num_classes, filters=(64, 32), dense=(64, 64), dropout=0.2):
    model = Sequential()
    model.add(Conv2D(filters[0], (5, 5), input_shape=(1, 28, 28),
        activation='relu'))
    model.add(MaxPooling2D(pool_size=(2, 2)))
    model.add(Conv2D(filters[1], (3, 3), activation='relu'))
    model.add(MaxPooling2D(pool_size=(2, 2)))
    model.add(Dropout(dropout))
    model.add(Flatten())
    model.add(Dense(dense[0], activation='relu'))
    model.add(Dense(dense[0], activation='relu'))
    model.add(Dense(num_classes, activation='softmax'))
    return model
```

```python
@app.get("/blob/position/list")
def blob_position_list():
    ''' return most recent blob pos '''
    past_pos_list = []
    for item in blobs.history.tolist():
        x, y, z = item
        past_pos_list.append({"x": x, "y": y, "z": z
    return {"positions": past_pos_list}
```



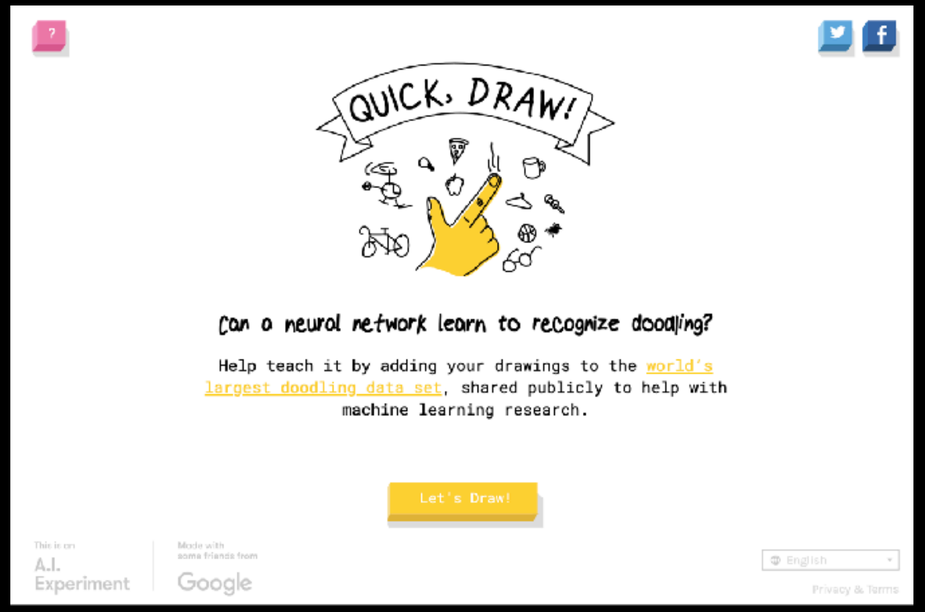
V2 changes - POST from pi to server. Run model on cpu.

Share the selected items

Apple Push Services: com.serpentinegalleries.IMagma

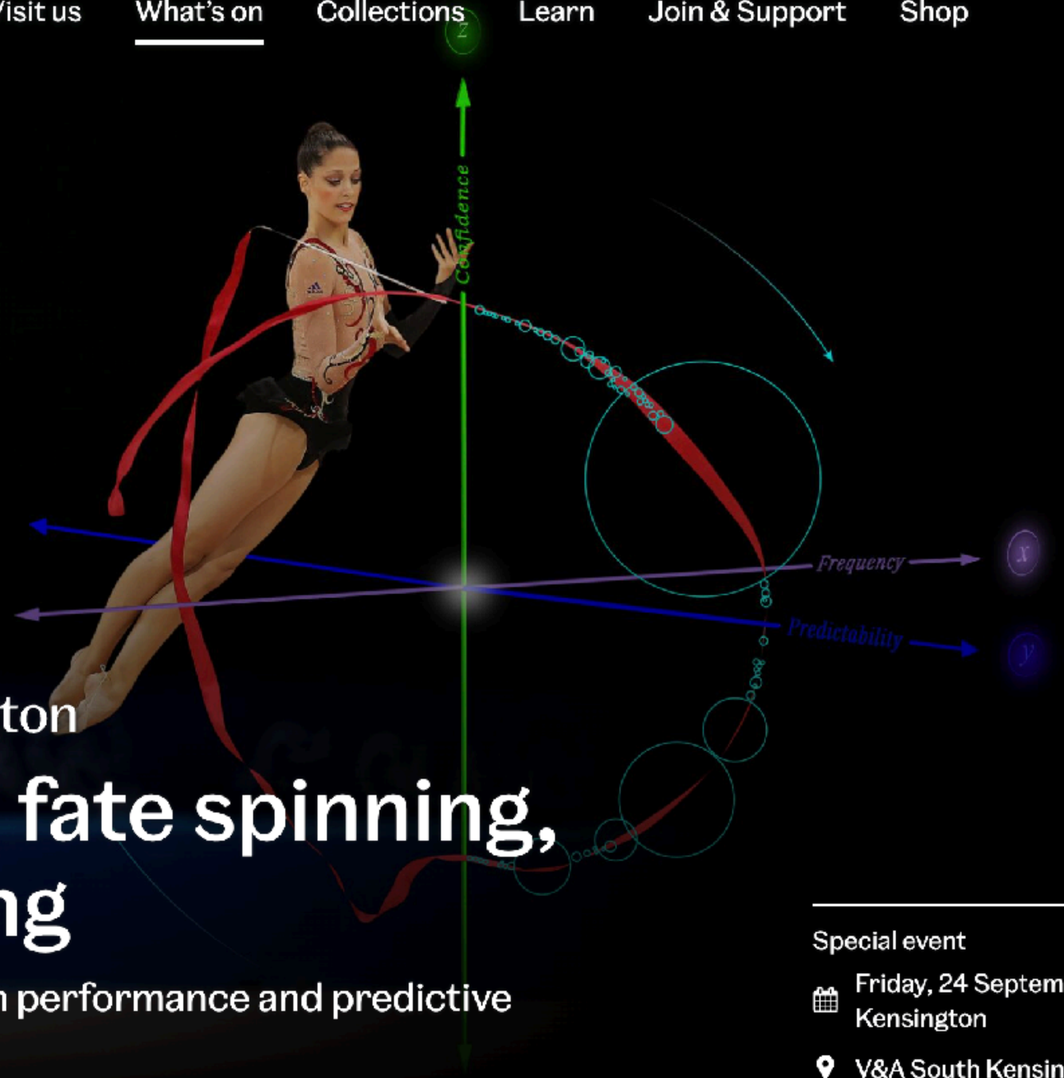
Subject Name
- User ID com.serpentinegalleries.IMagma
- Common Name Apple Push Services: com.serpentinegalleries.IMagma
- Organisational Unit 4F7QMNJVC9
- Organisation The Serpentine Trust
- Country or Region GB

Issuer Name
- Common Name Apple Worldwide Developer Relations Certification Authority
- Organisational Unit G4
- Organisation Apple Inc.
- Country or Region US




```python
@app.get("/admin/config")
async def set_start_date(username: str = Depends(get_current_username) ):
    config = ConfigParser()
    config.read('config.ini')
    data = {
        "exhibition_start_date": config.get('dormant_config', 'exhibition_start_date'),
        "exhibition_end_date": config.get('dormant_config', 'exhibition_end_date'),
        "exhibition_start_notification": config.get('dormant_config', 'exhibition_start_notification'),
        "exhibition_end_notification": config.get('dormant_config', 'exhibition_end_notification'),
        "dormant_text": config.get('dormant_config', 'dormant_text'),
        "last_updated": config.get('dormant_config', 'last_updated'),
        "last_notification": config.get('dormant_config', 'last_notification'),
    }
    return data
```

```python
#### ACTIVITY ####
@app.get("/dormant")
def is_dormant():
    config = ConfigParser()
    config.read('config.ini')
    ex_start = str(config.get('dormant_config', 'exhibition_start_date'))
    ex_stop = str(config.get('dormant_config', 'exhibition_end_date'))

    today = datetime.datetime.now().strftime("%Y-%m-%d")
    print(today, ex_start, ex_stop)
    if today >= ex_start and today <= ex_stop:
        dormant_b = 0
        dormant_t = "The oracle is live."
    else:
        dormant_b = 1
        dormant_t = config.get('dormant_config', 'dormant_text')
    return {"dormant": dormant_b, "dormant_text" : dormant_t}
```



V&A South Kensington

ribbon.Py: fate spinning, curve fitting

A collaboration between performance and predictive algorithms

Special event

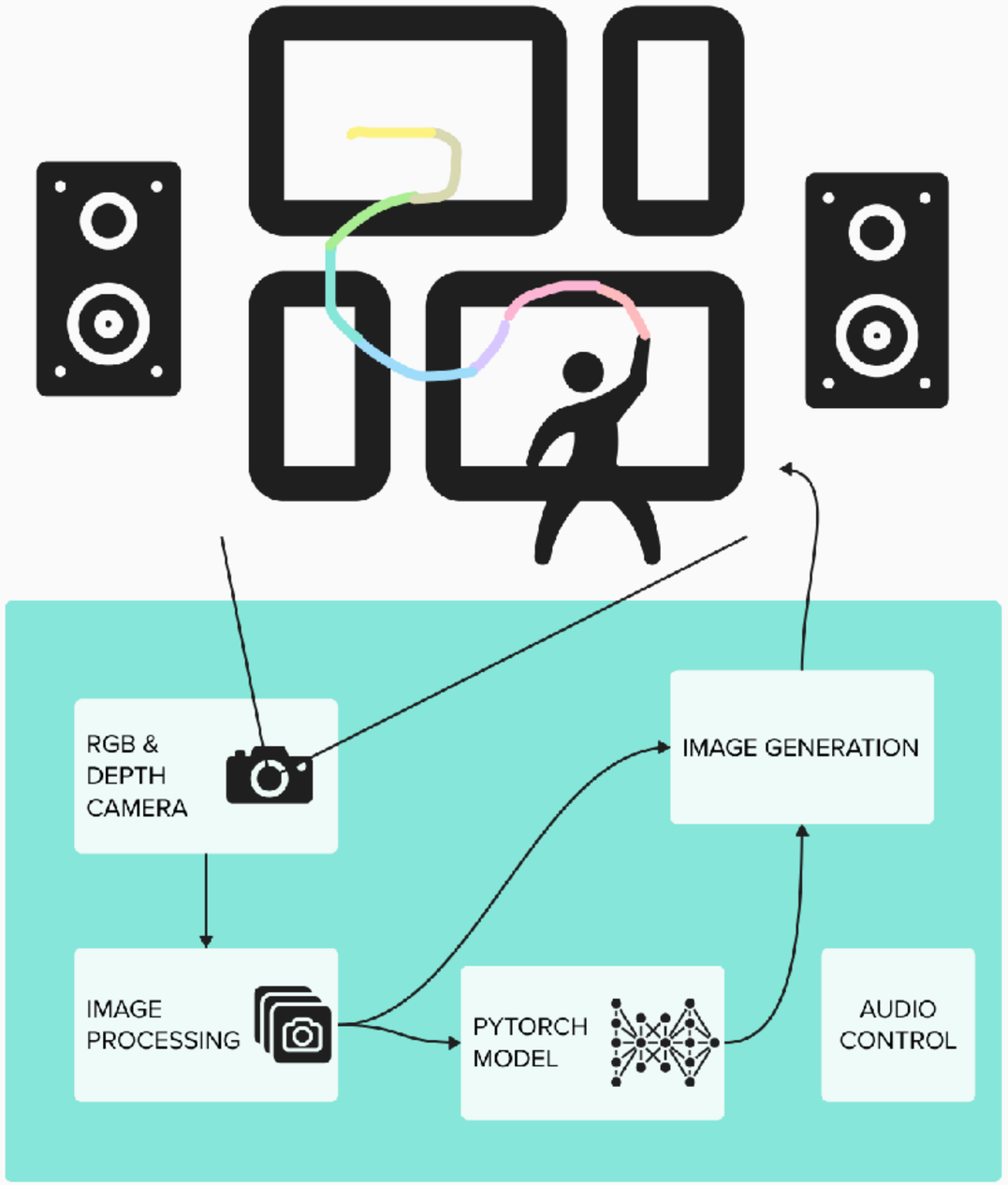
Friday, 24 September 2021 at V&A South Kensington

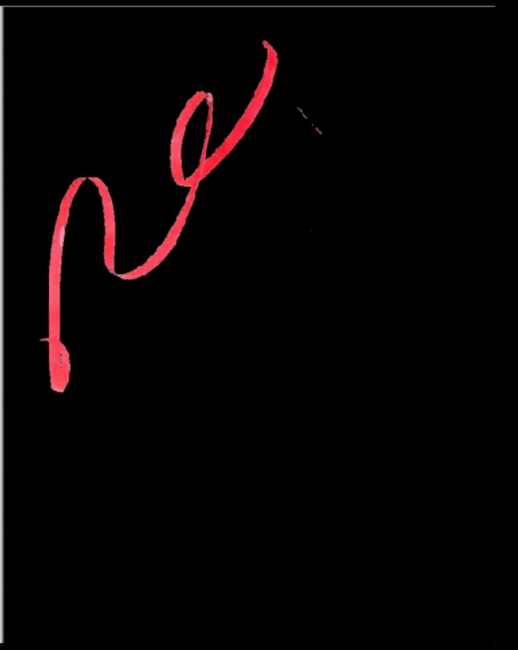
V&A South Kensington Past event

Learn more about the predictive algorithms used to project climate change through this intriguing performance by artist/design duo Legrand Jäger (Guillemette Legrand and Eva Jäger). Using machine vision software developed with Isaac Clarke, the performance analyses and diagrams the curves produced by rhythmic gymnast, Mimi-Isabella Cesar, and her ribbon. Music developed with Tommie Introna. Note: Performances will run on the hour, every hour, between 13.00 and 17.00 and during the Friday Late.

Read more

studiolegrandjager.com/projects/ribbon-py

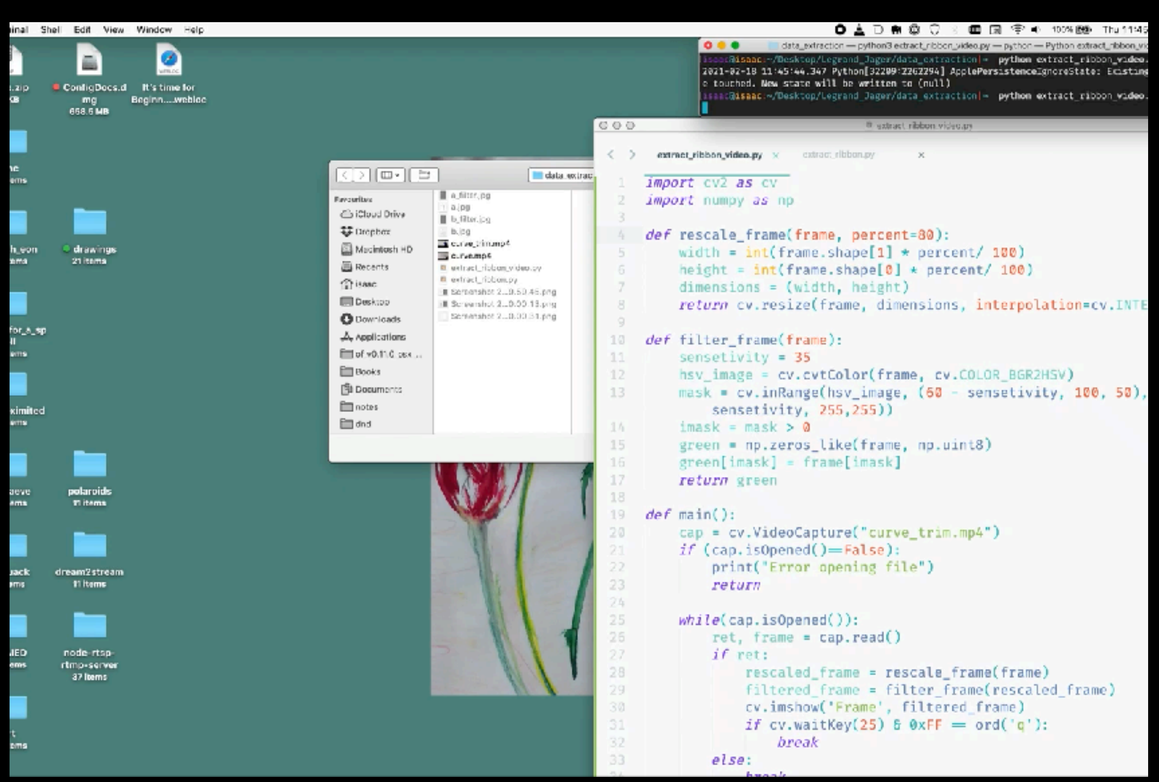

RGB &
DEPTH
CAMERA
IMAGE GENERATION
IMAGE
PROCESSING
PYTORCH
MODEL
AUDIO
CONTROL

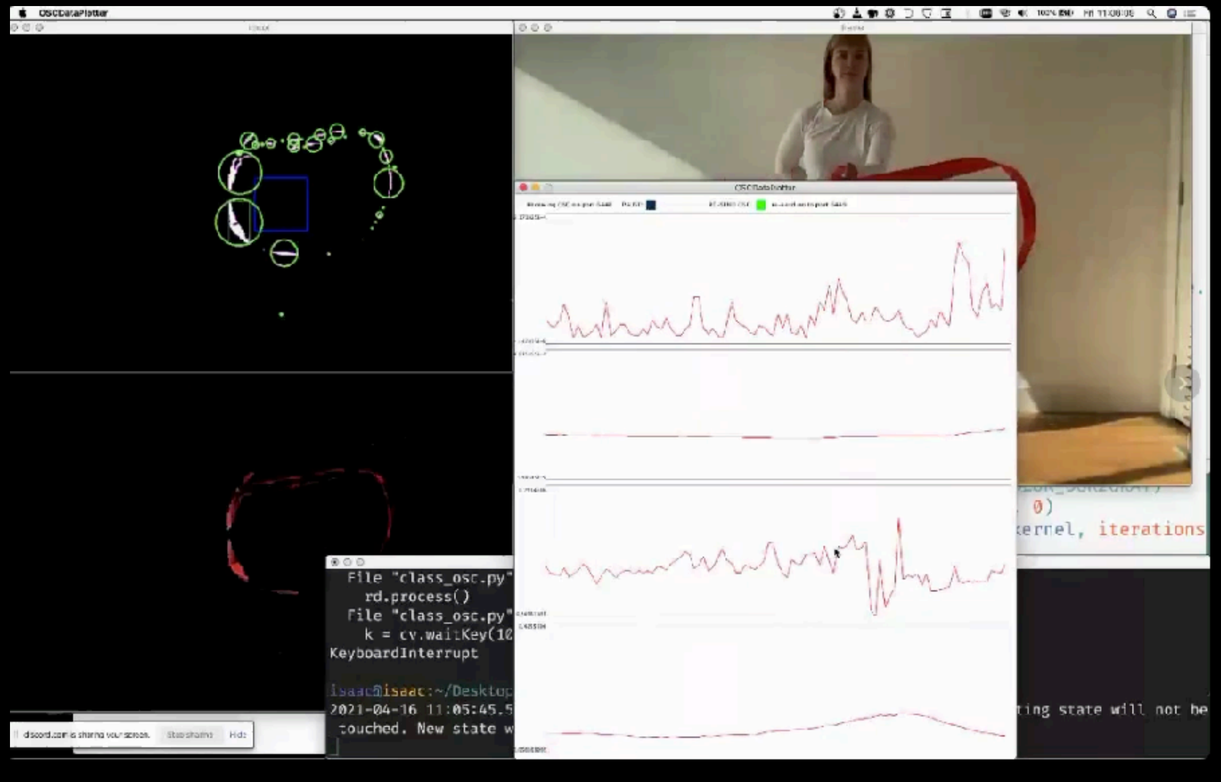


extract_ribbon.py

```python
import cv2 as cv
import numpy as np

# load input image, this would be replaced with a video feed and each frame of the video is the image
image = cv.imread("b.jpg")

# convert from BGR (blue, green, red) to HSV(hue, saturation, value/brightness)
hsv_image = cv.cvtColor(image, cv.COLOR_BGR2HSV)

# mask the ribbon colour range
# red
# mask = cv.inRange(hsv_image, (170, 70, 50), (180, 255,255))
# blue
mask = cv.inRange(hsv_image, (100, 150, 50), (140, 255,255))

# take a slice of the data for the colour range
imask = mask > 0

# make an empty data set the same size as the original image
red = np.zeros_like(image, np.uint8)

# map the sliced data from the original image to the new empty image
red[imask] = image[imask]

# save the new image
cv.imwrite("b_filter.jpg", red)

```

Line 14, Column 49 Spaces: 4 Python


Edit View Window Help
ConfigDocs.dmg
668.6 MB
It's time for Beginn....webloc
drawings
21 items
polaroids
11 items
dream2stream
11 items
node-rtsp-rtmp-server
47 items
data_extraction — python3 extract_ribbon_video.py — python — Python extract_ribbon_video.py
extract_ribbon_video.py
extract_ribbon.py
import cv2 as cv
import numpy as np
def rescale_frame(frame, percent=80):
width = int(frame.shape[1] * percent/ 100)
height = int(frame.shape[0] * percent/ 100)
dimensions = (width, height)
return cv.resize(frame, dimensions, interpolation=cv.INTE
def filter_frame(frame):
sensetivity = 35
hsv_image = cv.cvtColor(frame, cv.COLOR_BGR2HSV)
mask = cv.inRange(hsv_image, (60 - sensetivity, 100, 50),
sensetivity, 255,255))
imask = mask > 0
green = np.zeros_like(frame, np.uint8)
green[imask] = frame[imask]
return green
def main():
cap = cv.VideoCapture("curve_trim.mp4")
if (cap.isOpened()==False):
print("Error opening file")
return
while(cap.isOpened()):
ret, frame = cap.read()
if ret:
rescaled_frame = rescale_frame(frame)
filtered_frame = filter_frame(rescaled_frame)
cv.imshow('Frame', filtered_frame)
if cv.waitKey(25) & 0xFF == ord('q'):
break
else:


OSCDataPlotter
File "class_osc.py"
rd.process()
File "class_osc.py"
k = cv.waitKey(10
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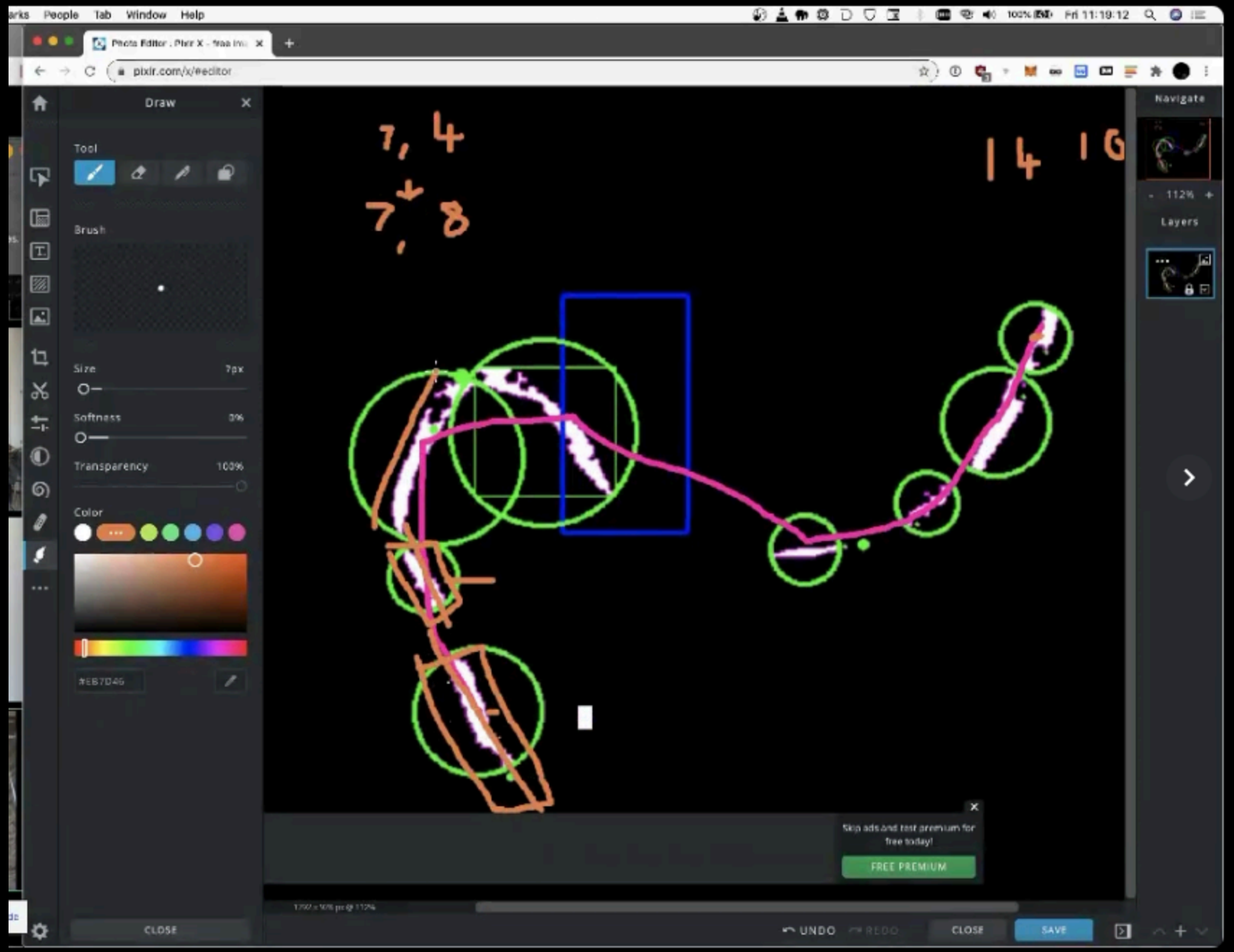
ting state will not be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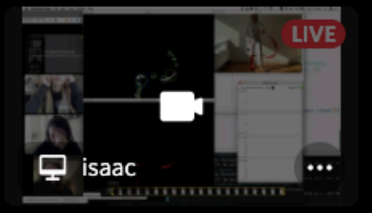
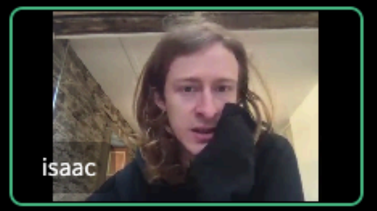
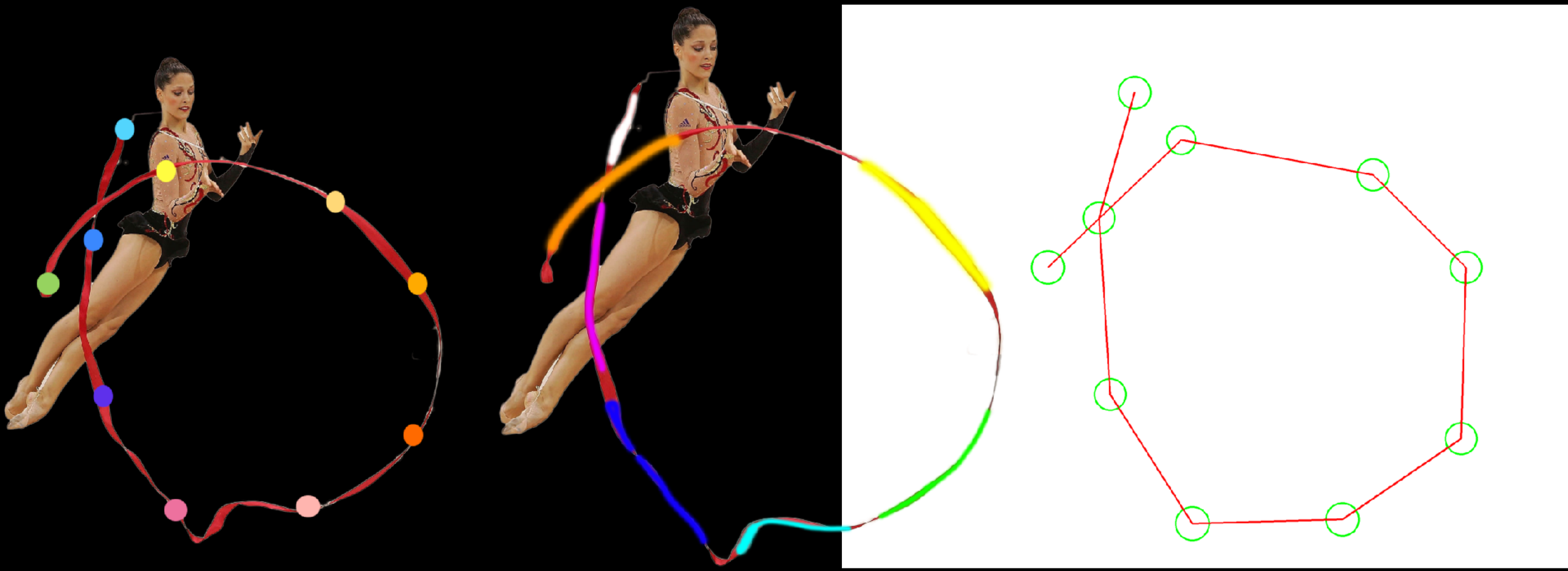
Skip ads and test premium for free today!
FREE PREMIUM
UNDO
REDO
CLOSE
SAVE

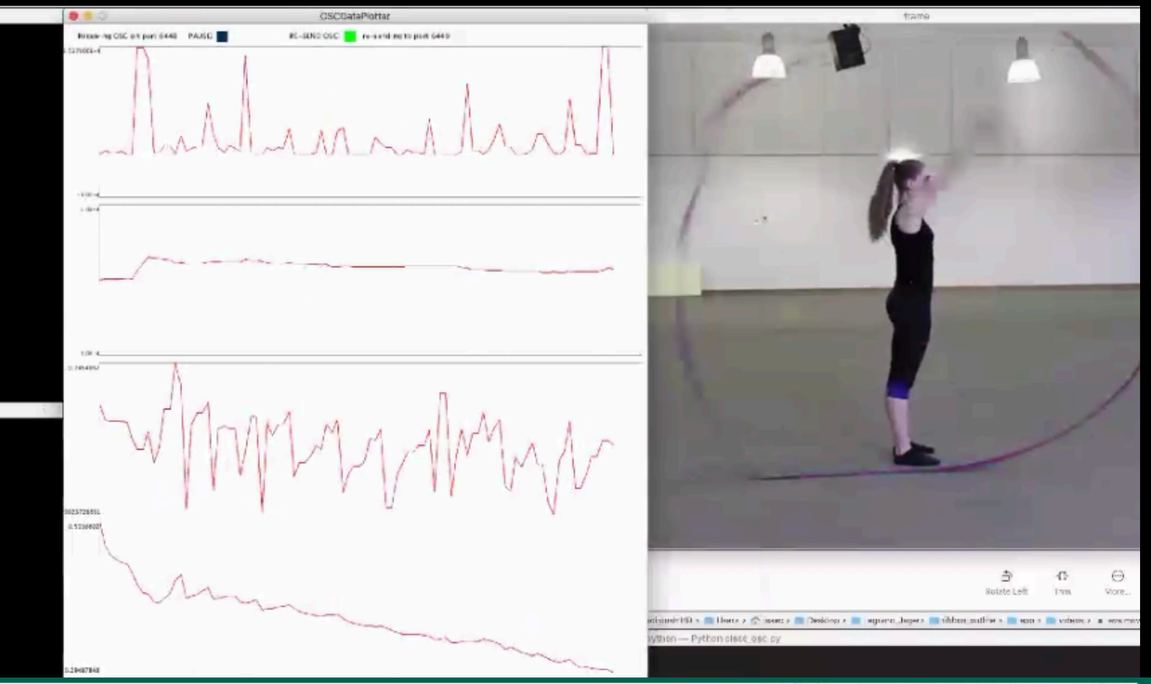

LIVE
isaac

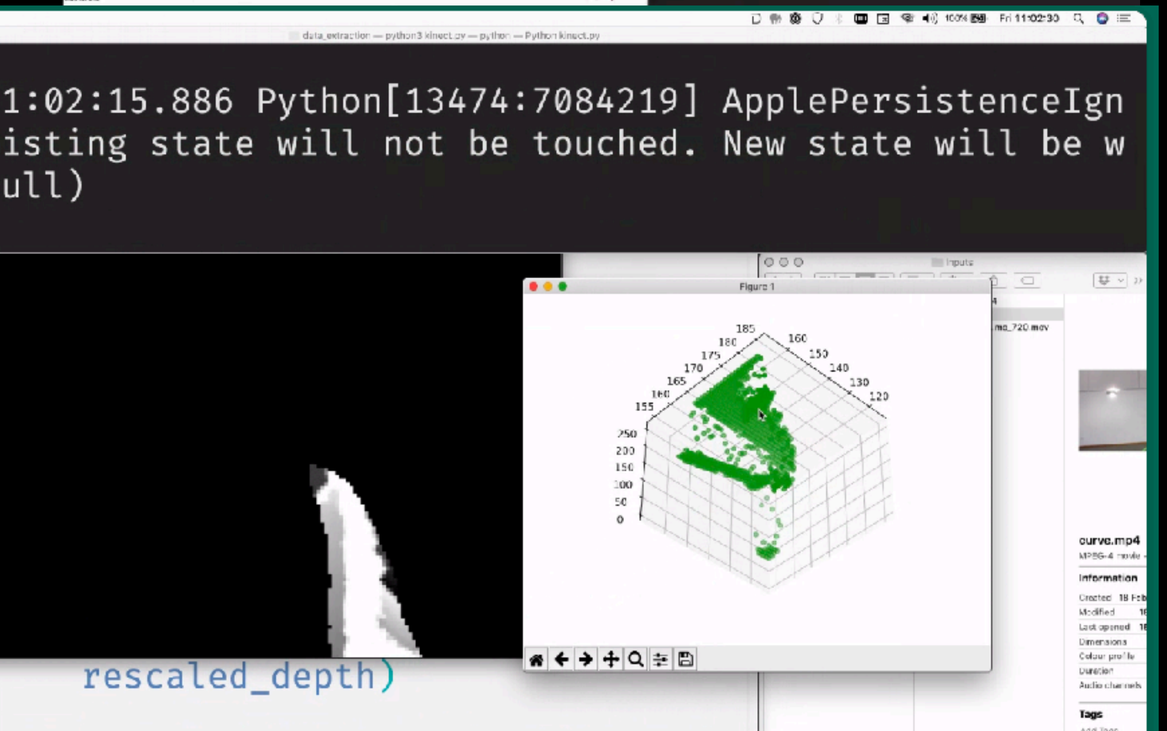
3v4

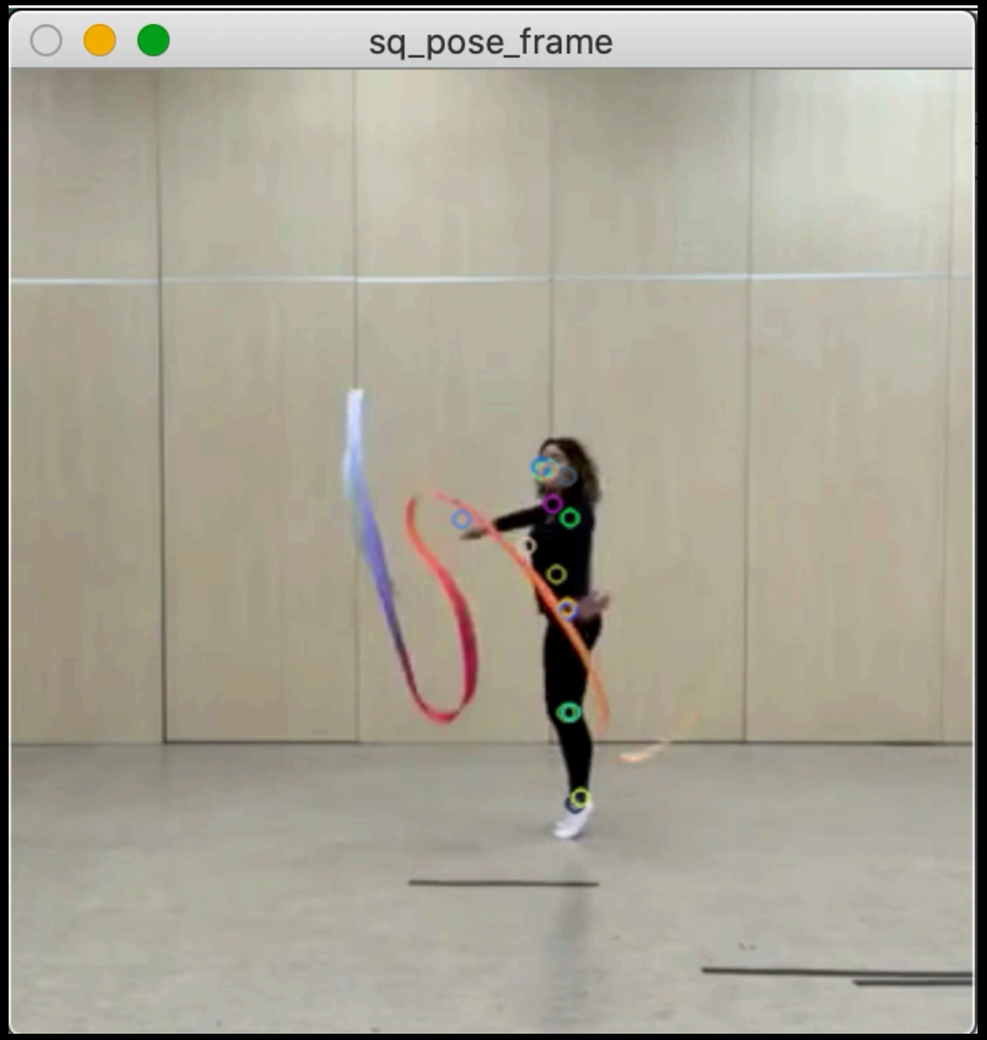
Guillemette

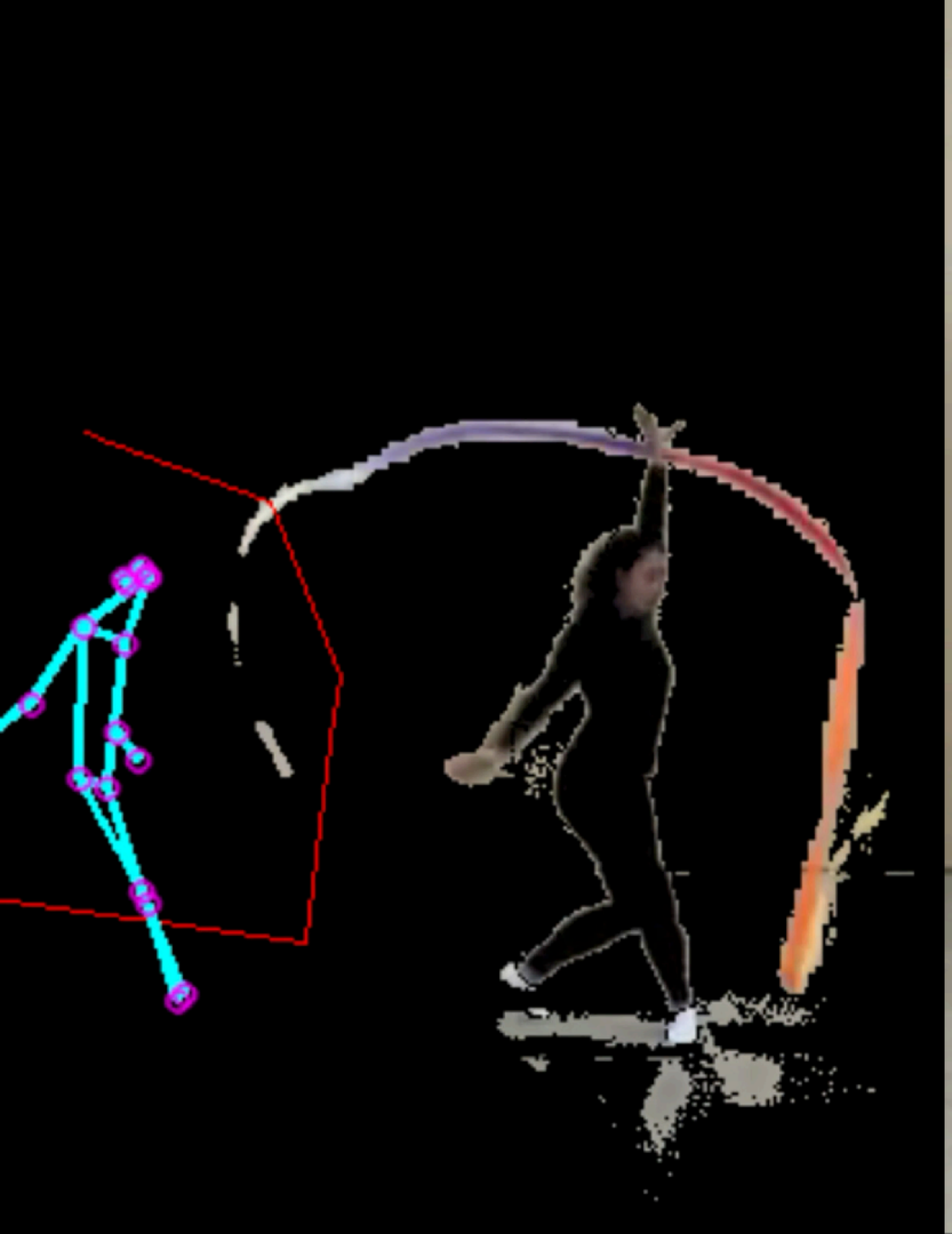

isaac

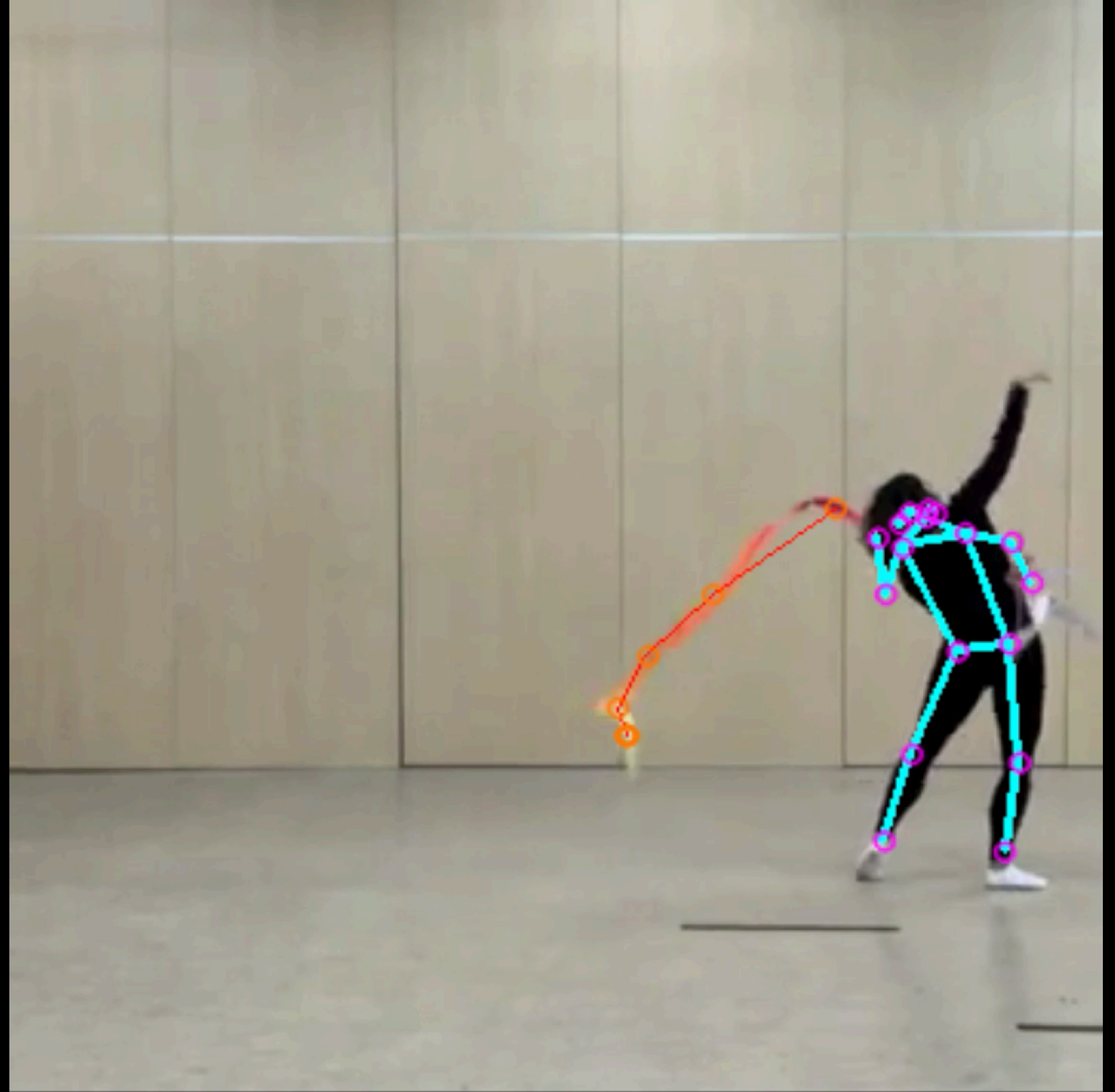



OSCDataPlottar
frame


1:02:15.886 Python[13474:7084219] ApplePersistenceIgn
isting state will not be touched. New state will be w
ull)
Figure 1
rescaled_depth)

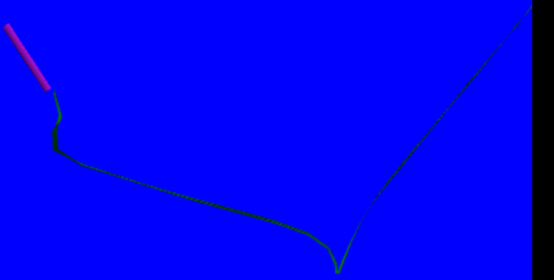

sq_pose_frame





babylon.js Playground 5.0.0-alpha.16 (WebGL2) TS Javascript WEBGL2 5.0.0

```
var createScene = function () {
    var scene = new BABYLON.Scene(engine);
    var light = new BABYLON.HemisphericLight("light", new BABYLON.Vector
    scene.clearColor = BABYLON.Color3.Blue();
    scene.ambientColor = BABYLON.Color3.Blue();
    var camera = new BABYLON.ArcRotateCamera("camera", -Math.PI / 3, Mat
    camera.attachControl(canvas, true);

    scene.enablePhysics(new BABYLON.Vector3(0, -10, 0), new BABYLON.Ammo
    // var ground = BABYLON.MeshBuilder.CreateBox("ground", {width: 80,
    // groundMat = new BABYLON.StandardMaterial("ground mat", scene);
    // groundMat.diffuseColor = new BABYLON.Color3(0.5, 0.5, 0.5);
    // ground.material = groundMat;

    // ground.physicsImpostor = new BABYLON.PhysicsImpostor(ground, BABY

    var batonHeight = 10;
    var yOffset = batonHeight/2 + 30;
    var baton = BABYLON.MeshBuilder.CreateCylinder("baton", {width: 1, d
    // var baton = BABYLON.MeshBuilder.CreateBox("baton", {width: 2, dep
    baton.position.x = 0;
    baton.position.y = yOffset;
    baton.position.z = 0;
    baton.rotationQuaternion = null;
    baton.physicsImpostor = new BABYLON.PhysicsImpostor(baton, BABYLON.Ph

    var batonMat = new BABYLON.StandardMaterial("baton mat", scene);
    batonMat.diffuseColor = new BABYLON.Color3(0.8, 0.1, 1);
    baton.material = batonMat;

    batonYawInc = 0.02;
    batonPitchInc = 0.05;
    batonRollInc = 0.06;

    var ribbonHeight = 600;
    var ribbon = BABYLON.MeshBuilder.CreateGround("ribbon", {width: 1, h
    ribbon.position.x = 0;
    ribbon.position.y = yOffset+batonHeight/2;
    ribbon.position.z = ribbonHeight/2+1;
```



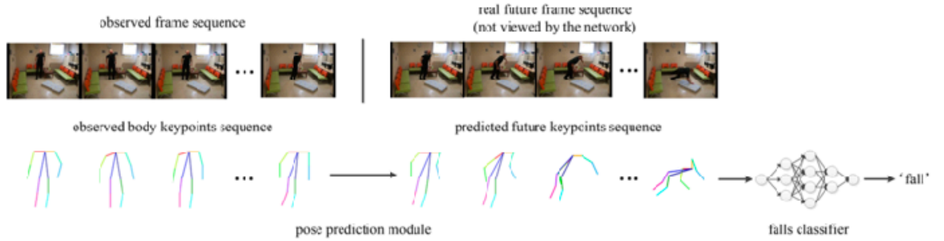


Figure 2. The major work flow of our model. A sequence of observed frames is input to the network. Then the human body keypoints are extracted from each frame to form a keypoints sequence, which is used to predict future keypoints sequence by the pose prediction module. At last, the predicted body pose is passed into a falls classifier to judge whether the person will fall down in the future.

3. Methodology

3.1. Overview of the Proposed Model

The problem to be solved in this paper is formulated as follow: Given t_{obs} observed frames $(f_1, f_2, .., f_{t_{\text{obs}}})$, we try to predict whether the human(s) in the video will fall down in next t_{pred} frames (*i.e.*, from $f_{t_{\text{obs}}+1}$ to $f_{t_{\text{obs}}+t_{\text{pred}}}$).

The skeleton framework of our model is presented in Fig. 2. The input is a sequence of observed frames. We first adopted OpenPose [4] to extract keypoints coordinates of human(s) from each ot
of detected persons we
ing algorithm, to clust
same person in differe
son was corresponding
$\mathbf{K}^i_{obs} = (\mathbf{k}^i_1, \mathbf{k}^i_2, .., \mathbf{k}^i_{t_o}$
coordinates of the i-th
Based on the observ
the relative position be
a keypoints vectorizati
from coordinate repres
of the i-th person was
Then, the pose predic
architecture [30] was
t_{pred} frames. Consider
units made the network
eral consecutive keypo
shorten the lengths of b
ers. Moreover, shorter s
pose problem caused by
After that, $\overline{\mathbf{k}^i_{t_{\text{obs}}+t_{\text{pred}}}}$
i-th person at frame f_t
classification. The fall
network and was traine
in which each frame w
Combining the pose pr
our model was capable

3.2. Keypoints Vectorization

The keypoints coordinates extracted by OpenPose [4] cannot reflect the correlation between different keypoints, and suffered from the effects of body skeleton's absolute position and scale. With the motivation that the same pose should be represented by the same keypoints vector, we exploited the following keypoints vectorization method.

As we know, the 18 keypoints of MS COCO [19] are nose, neck, left and right shoulders, elbows, wrists, hips, knees, ankles, eyes and ears. Since we focused on the body

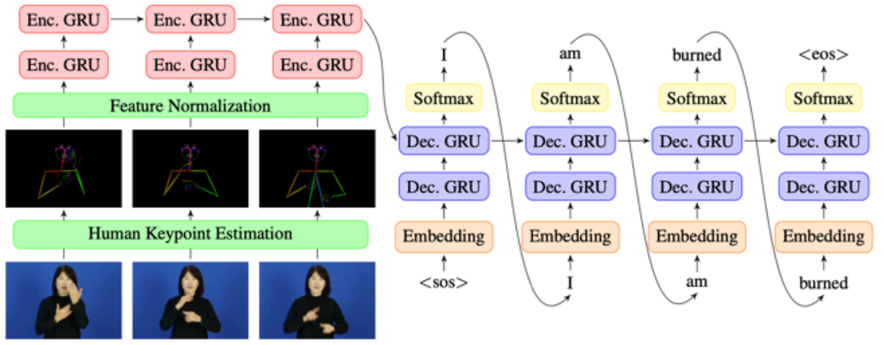


Figure 4. An overall architecture of our approach that translates a sign language video into a natural language sentence using sequence to sequence model based on GRU cells.

4.1. Human Keypoint Detection by OpenPose

First, our recognition system is expected to be robust in different cluttered backgrounds as it only detects the human body. Second, the system based on the human keypoint detection works well regardless of signer since the variance of extracted keypoints are negligible. Moreover, we apply the feature normalization technique to further reduce the variance which is

Random Temporal Skipping for Multirate Video Analysis

Yi Zhu[1] and Shawn Newsam[1]

University of California at Merced, Merced CA 95343, USA
{yzhu25,snewsam}@ucmerced.edu

Abstract. Current state-of-the-art approaches to video understanding adopt temporal jittering to simulate analyzing the video at varying frame rates. However, this does not work well for multirate videos, in which actions or subactions occur at different speeds. The frame sampling rate should vary in accordance with the different motion speeds. In this work, we propose a simple yet effective strategy, termed random temporal skip-

outputs are applied to a robot platform, NAO, for demonstrati
for social interactions. The proposed system can run in real-tin
with NVidia RTX 2080 Ti graphics card.

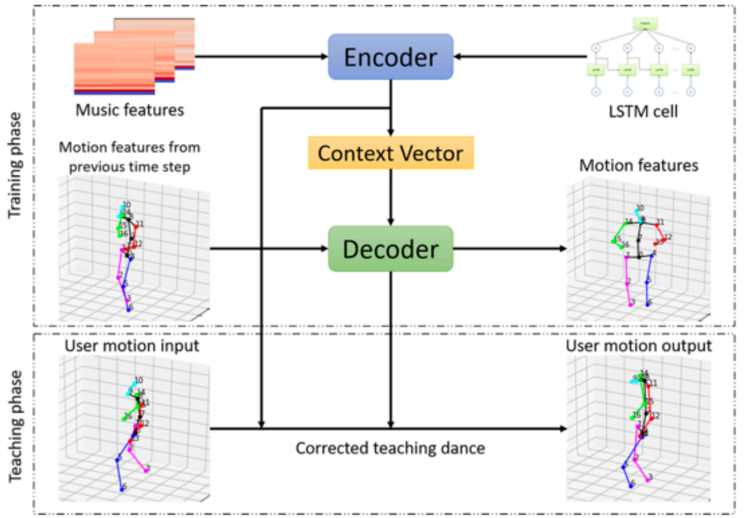
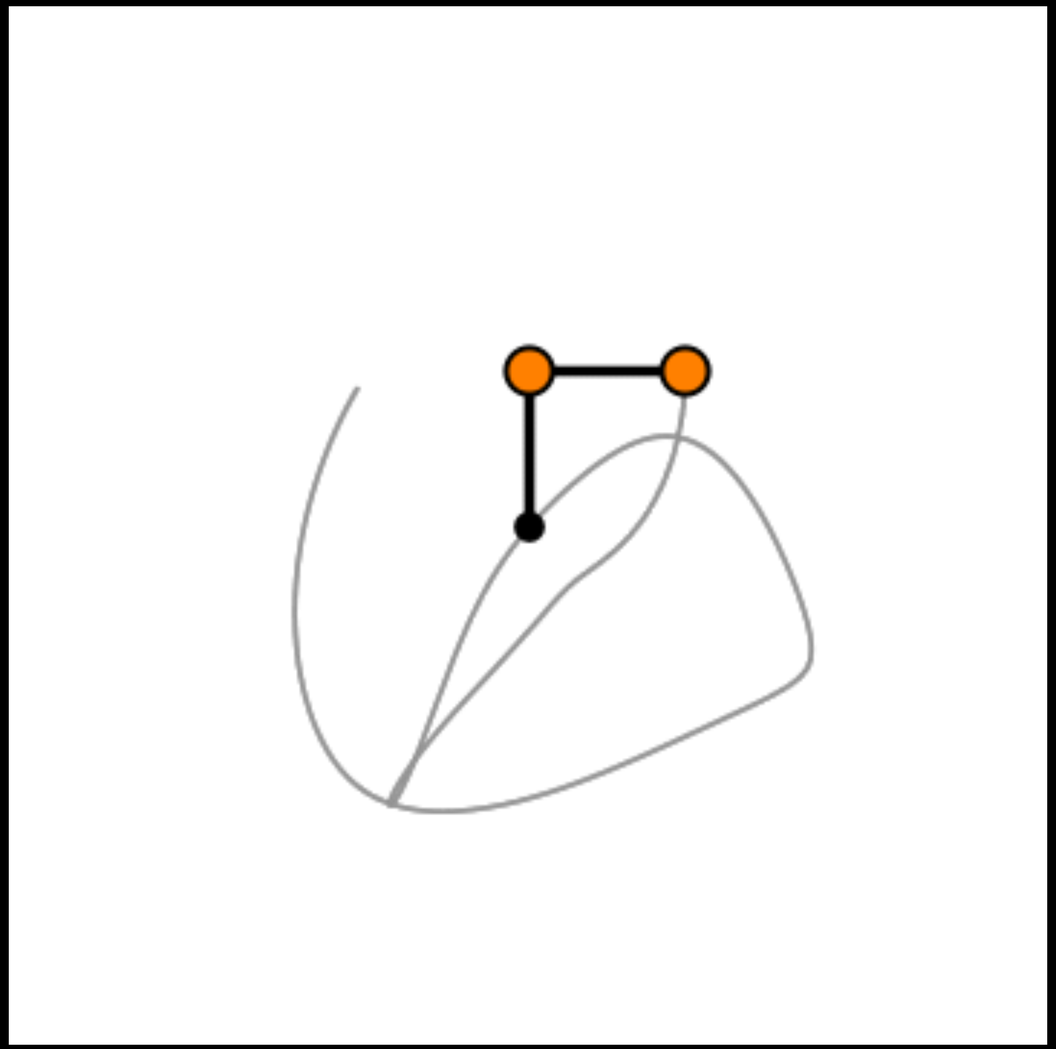


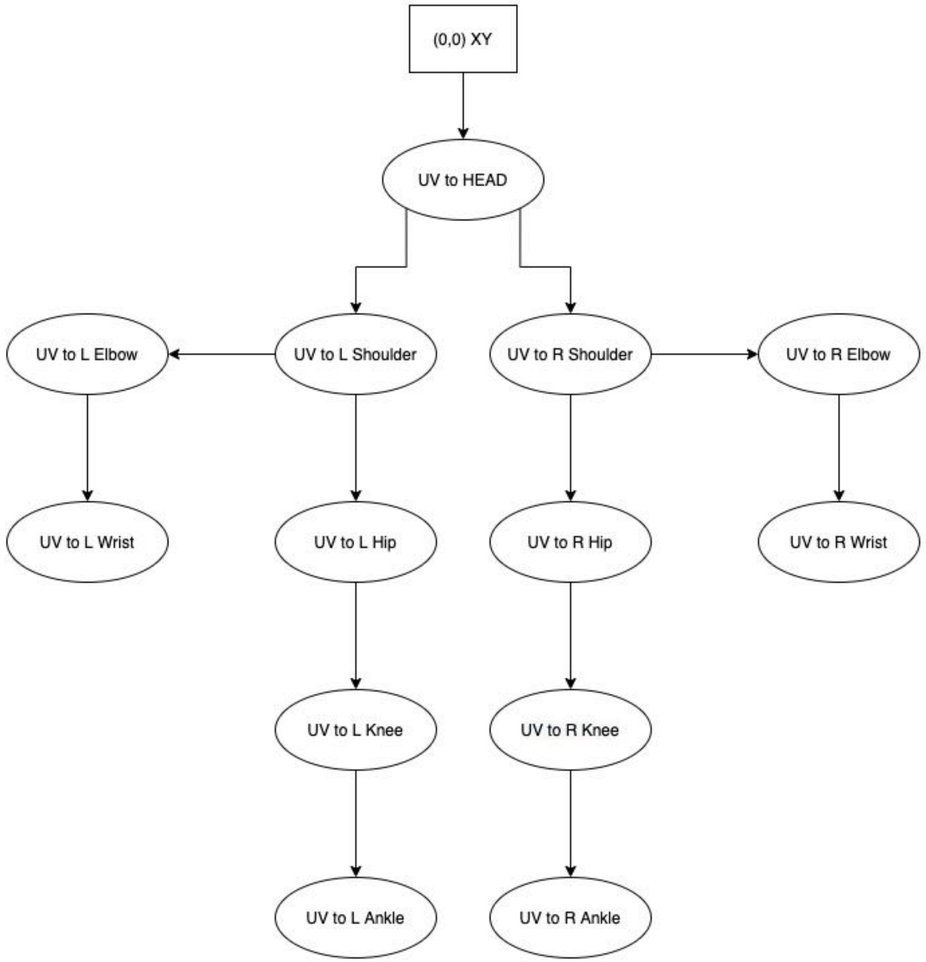
Figure 1: Seq2Seq model with Encoder and Decoder.

2.1 Encoder for Input Sequence Processing

For the musical feature to provide as an input to our training n

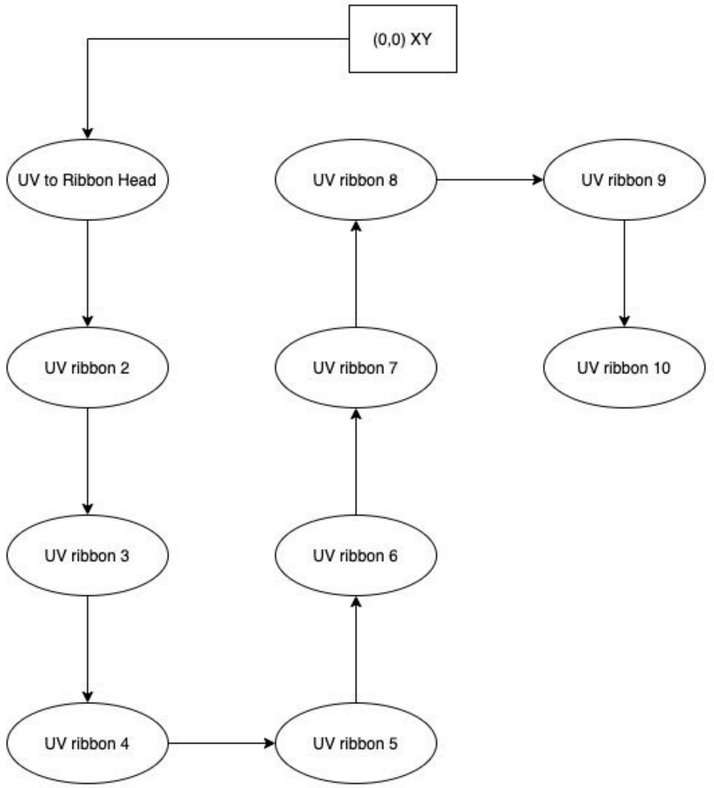


POSE

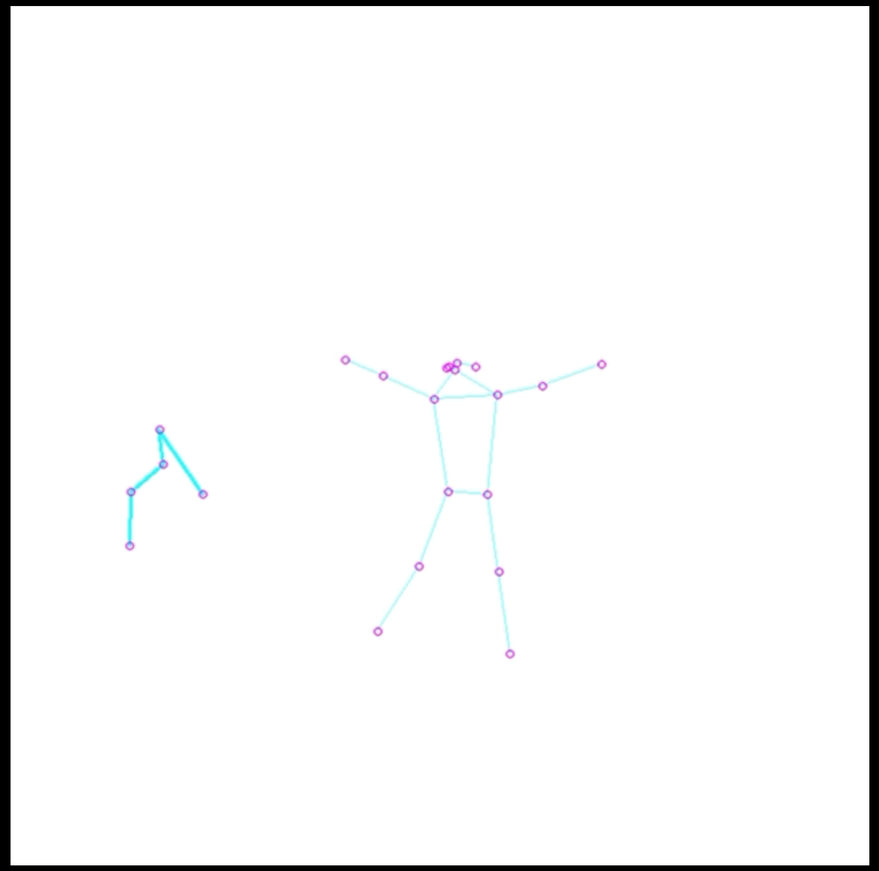


POSE = (XY, UV, UV, UV, UV, UV, UV, UV, UV, UV, UV, UV, UV, UV, UV)
SEQ = (POSE, POSE, POSE ...)

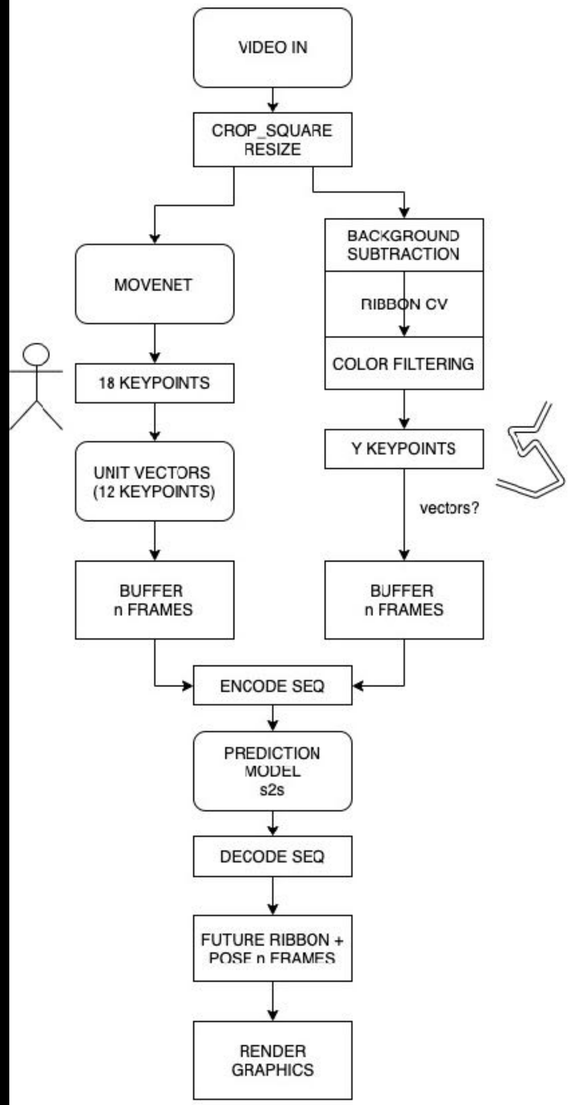
RIBBON



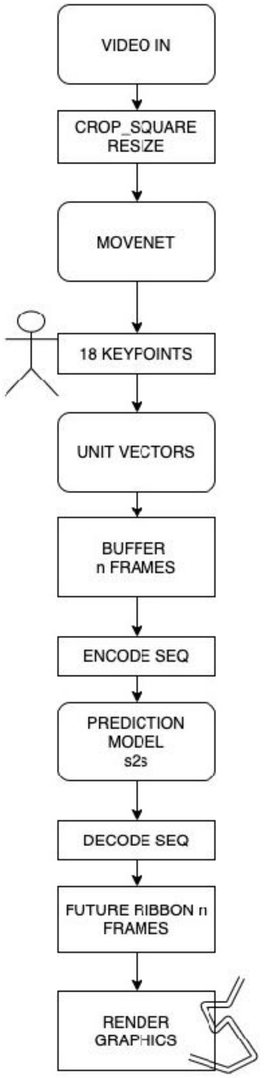
RIBBON = (XY, UV, UV, UV, UV, UV, UV, UV, UV, UV, UV, UV)
SEQ = (RIBBON, RIBBON, RIBBON ...)



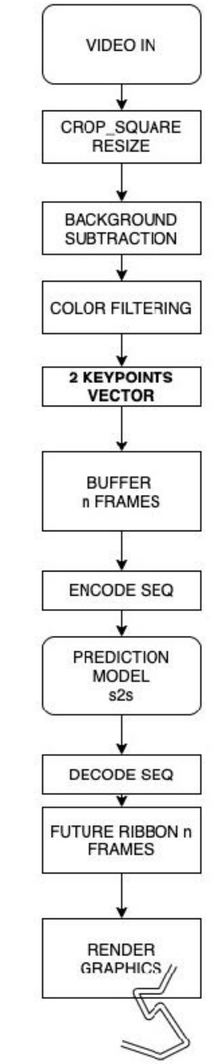
POSE + RIBBON TO FUTURE POSE + RIBBON

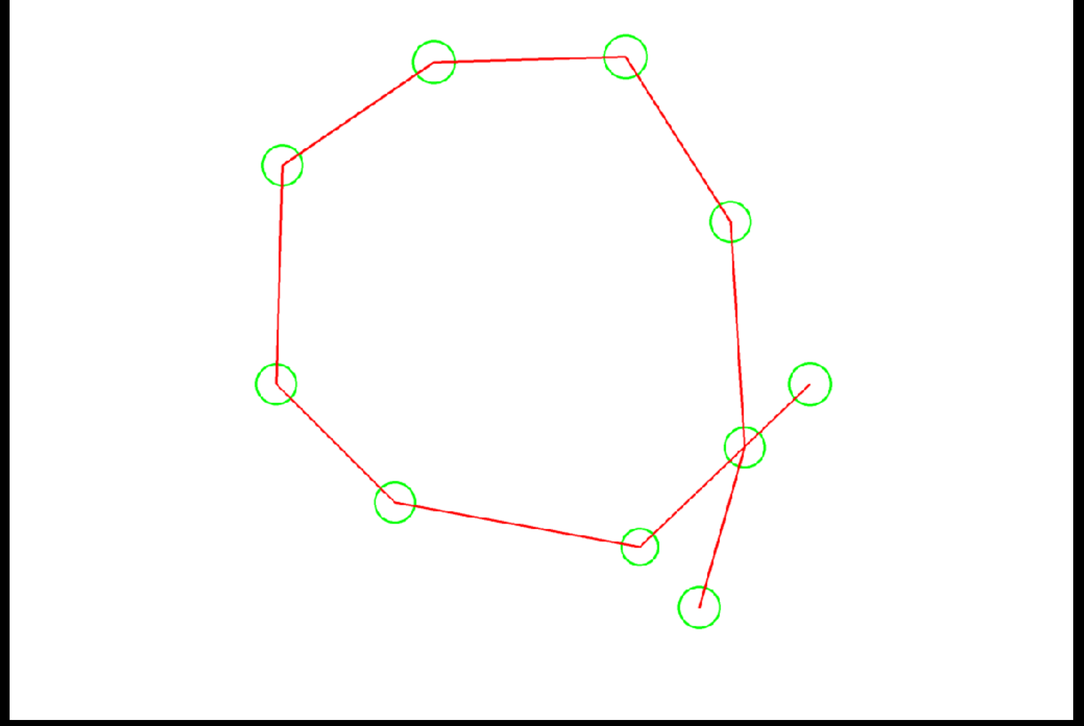


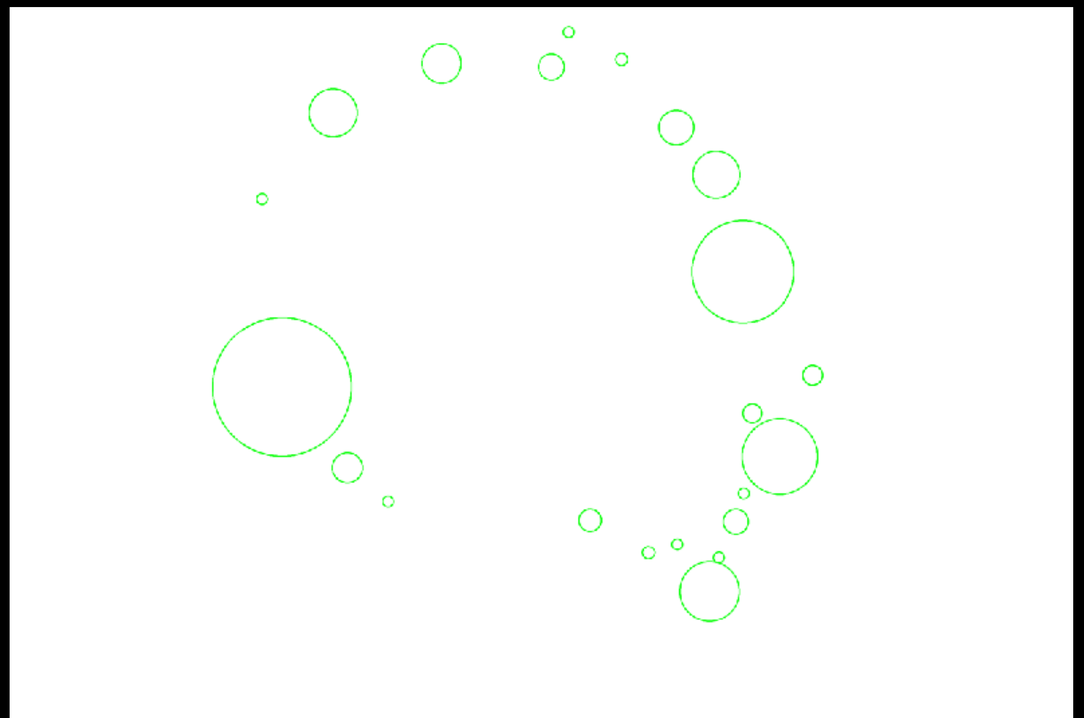
POSE TO FUTURE RIBBON

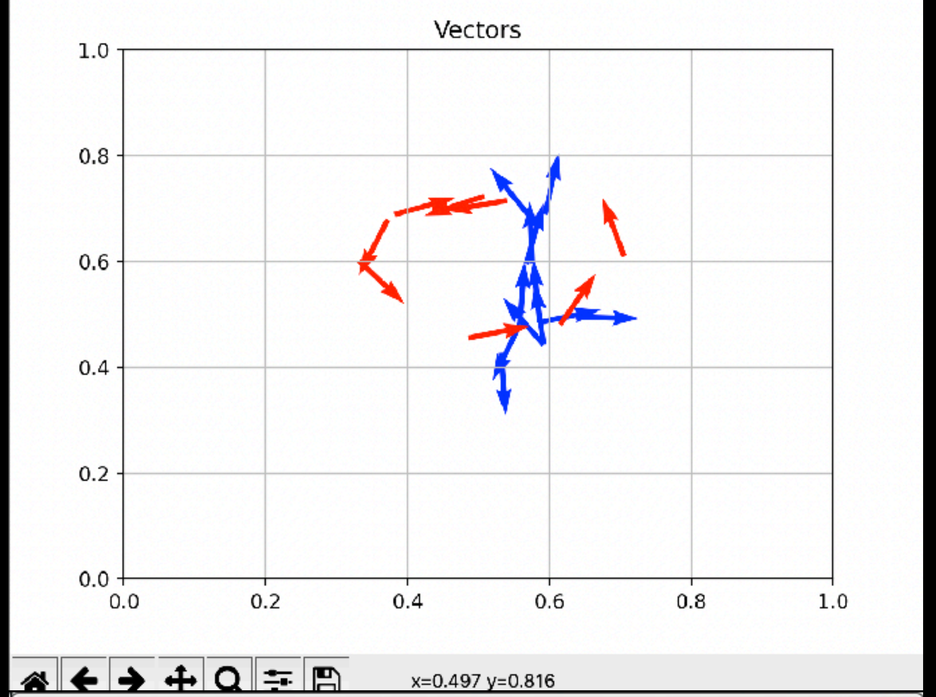


RIBBON HEAD TO FUTURE RIBBON








Vectors
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
x=0.497 y=0.816

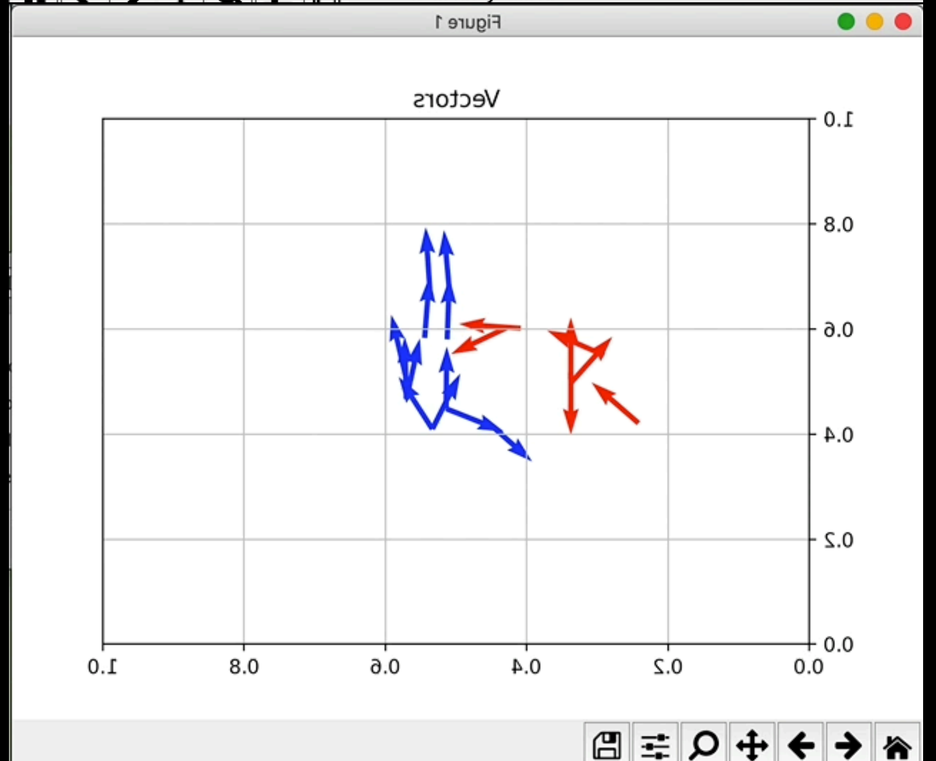
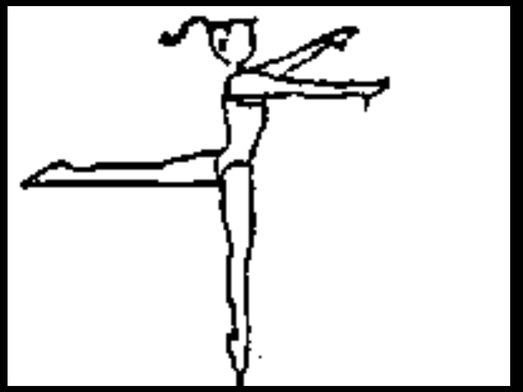
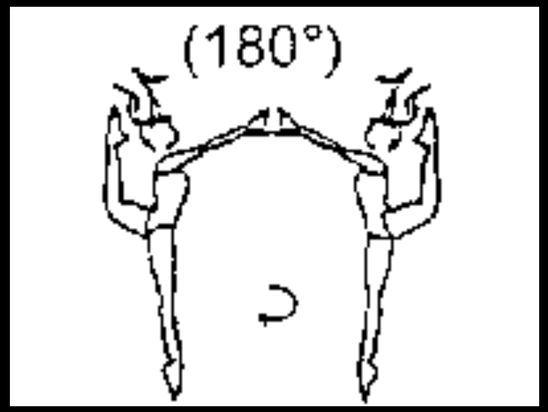
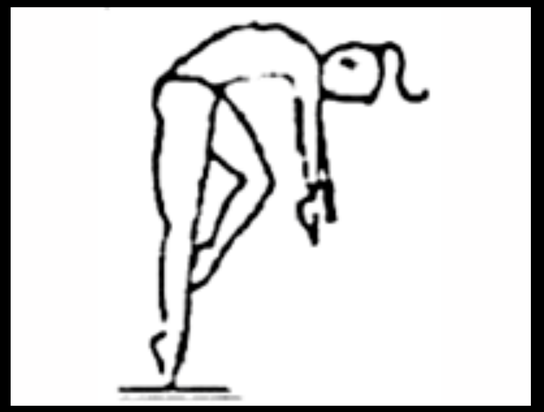


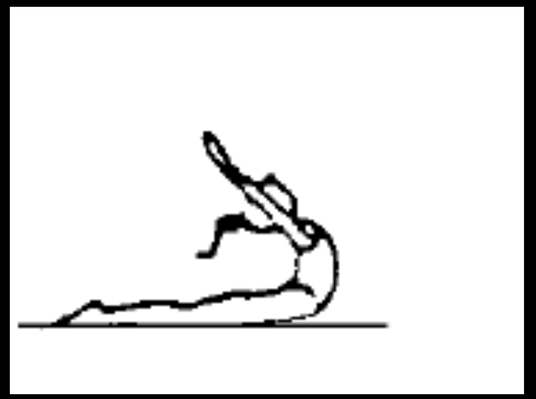
Figure 1
Vectors

4




(180°)





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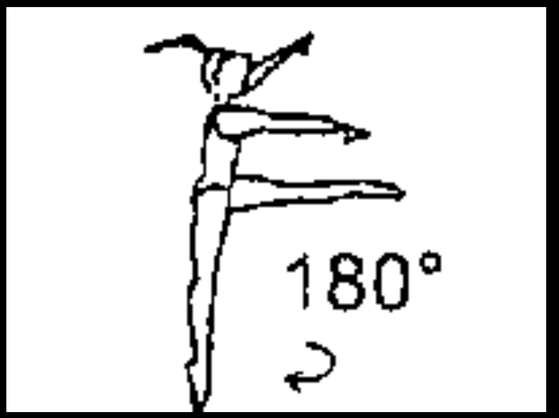
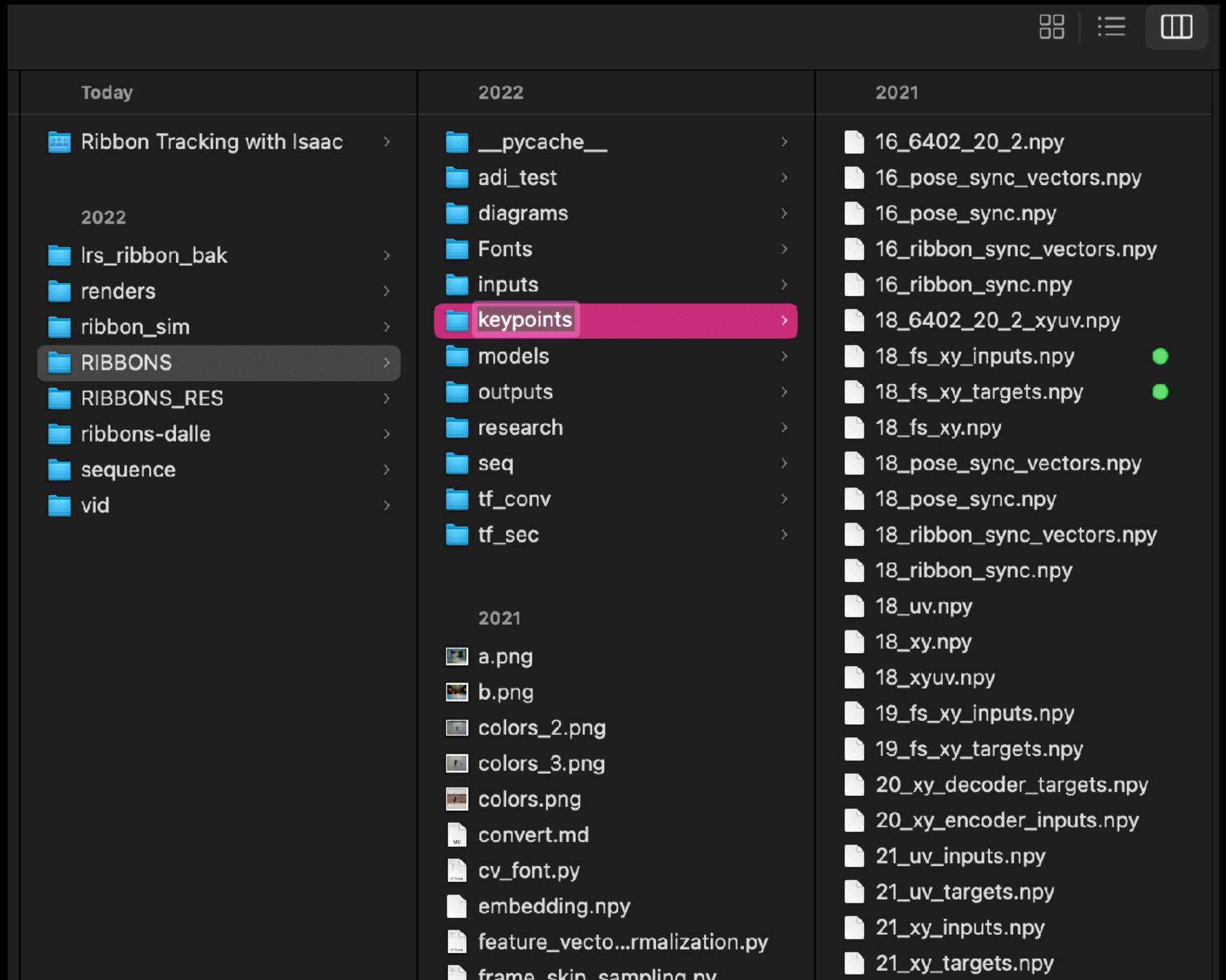
3


180°


Today
Ribbon Tracking with Isaac
2022
lrs_ribbon_bak
renders
ribbon_sim
RIBBONS
RIBBONS_RES
ribbons-dalle
sequence
vid
2022
__pycache__
adi_test
diagrams
Fonts
inputs
keypoints
models
outputs
research
seq
tf_conv
tf_sec
2021
a.png
b.png
colors_2.png
colors_3.png
colors.png
convert.md
cv_font.py
embedding.npy
feature_vecto...rmalization.py
2021
16_6402_20_2.npy
16_pose_sync_vectors.npy
16_pose_sync.npy
16_ribbon_sync_vectors.npy
16_ribbon_sync.npy
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18_fs_xy_inputs.npy
18_fs_xy_targets.npy
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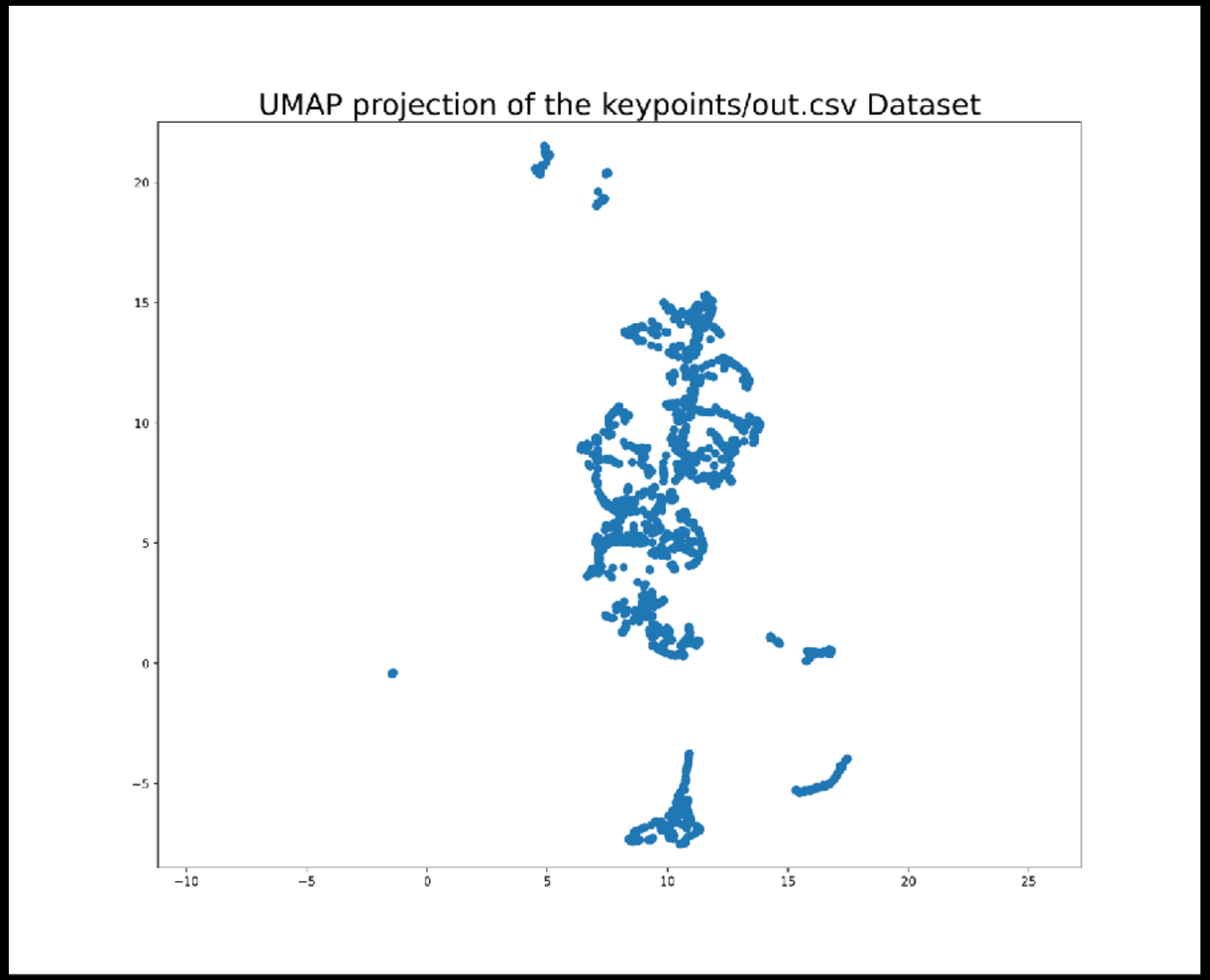
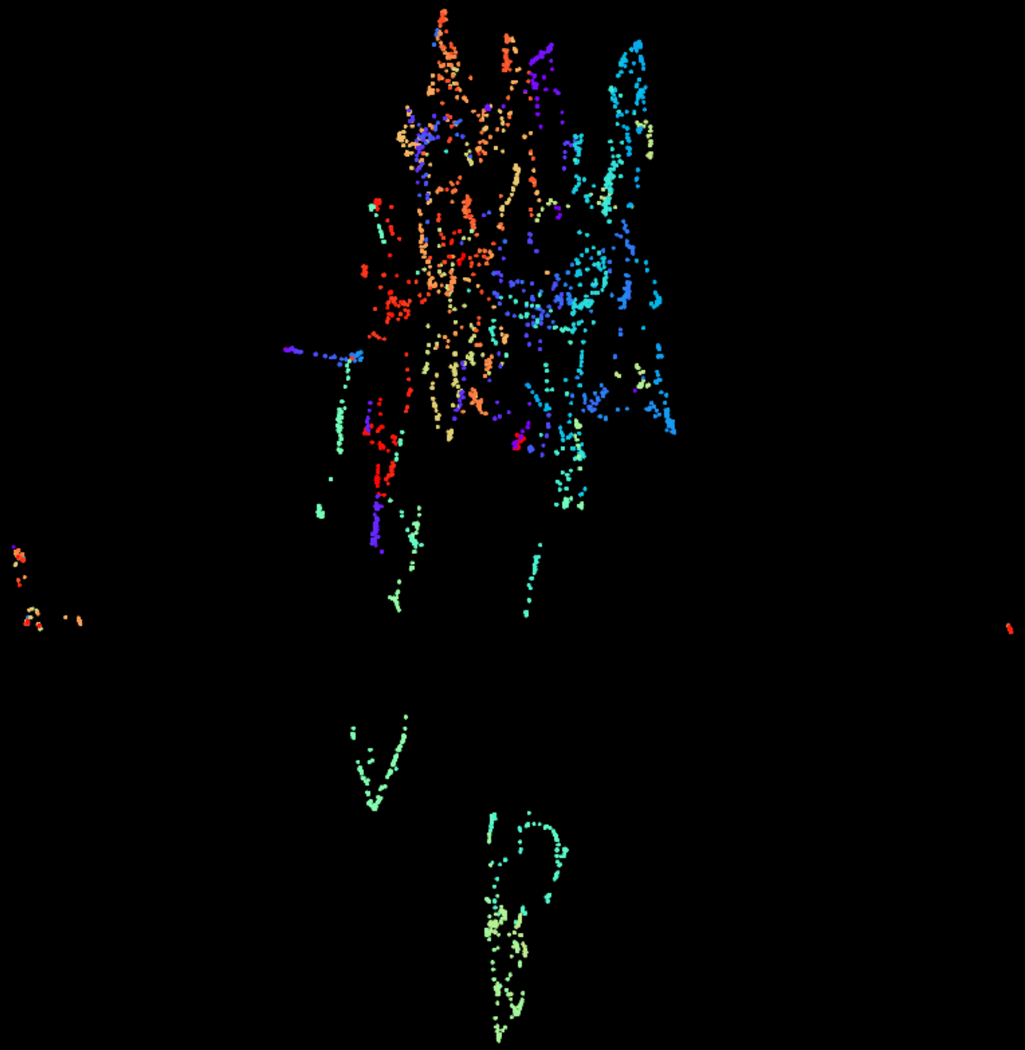
18_pose_sync_vectors.npy
18_pose_sync.npy
18_ribbon_sync_vectors.npy
18_ribbon_sync.npy
18_uv.npy
18_xy.npy
18_xyuv.npy
19_fs_xy_inputs.npy
19_fs_xy_targets.npy
20_xy_decoder_targets.npy
20_xy_encoder_inputs.npy
21_uv_inputs.npy
21_uv_targets.npy
21_xy_inputs.npy
21_xy_targets.npy


UMAP projection of the keypoints/out.csv Dataset
20
15
10
5
0
−5
−10
−5
0
5
10
15
20
25



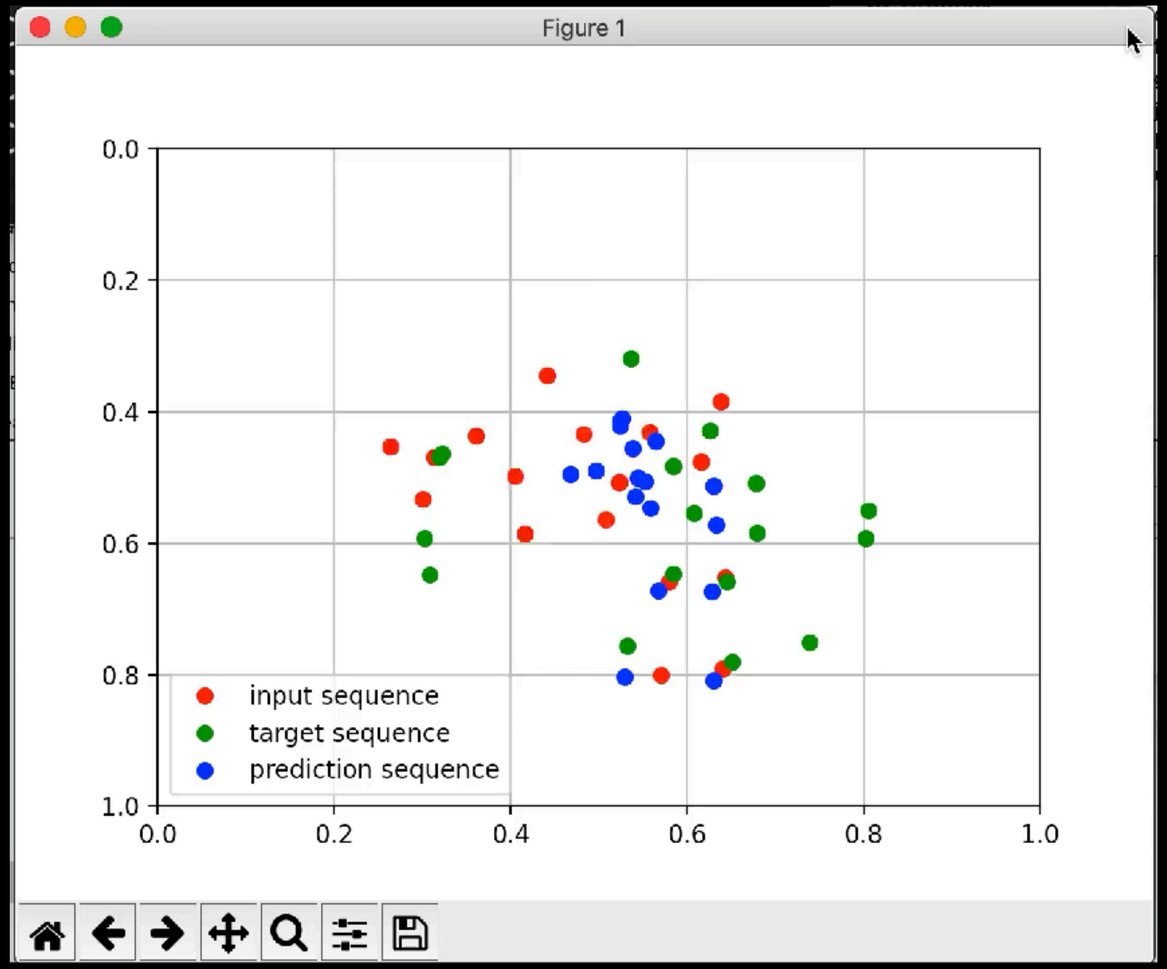
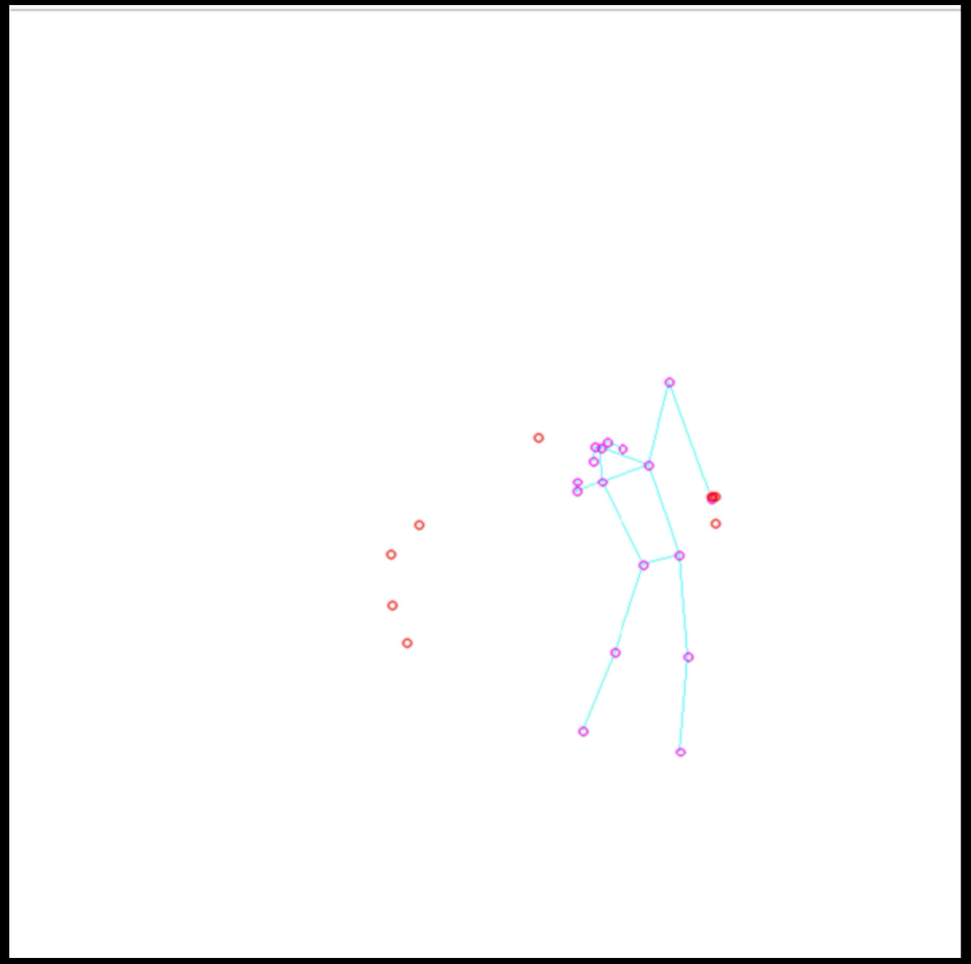
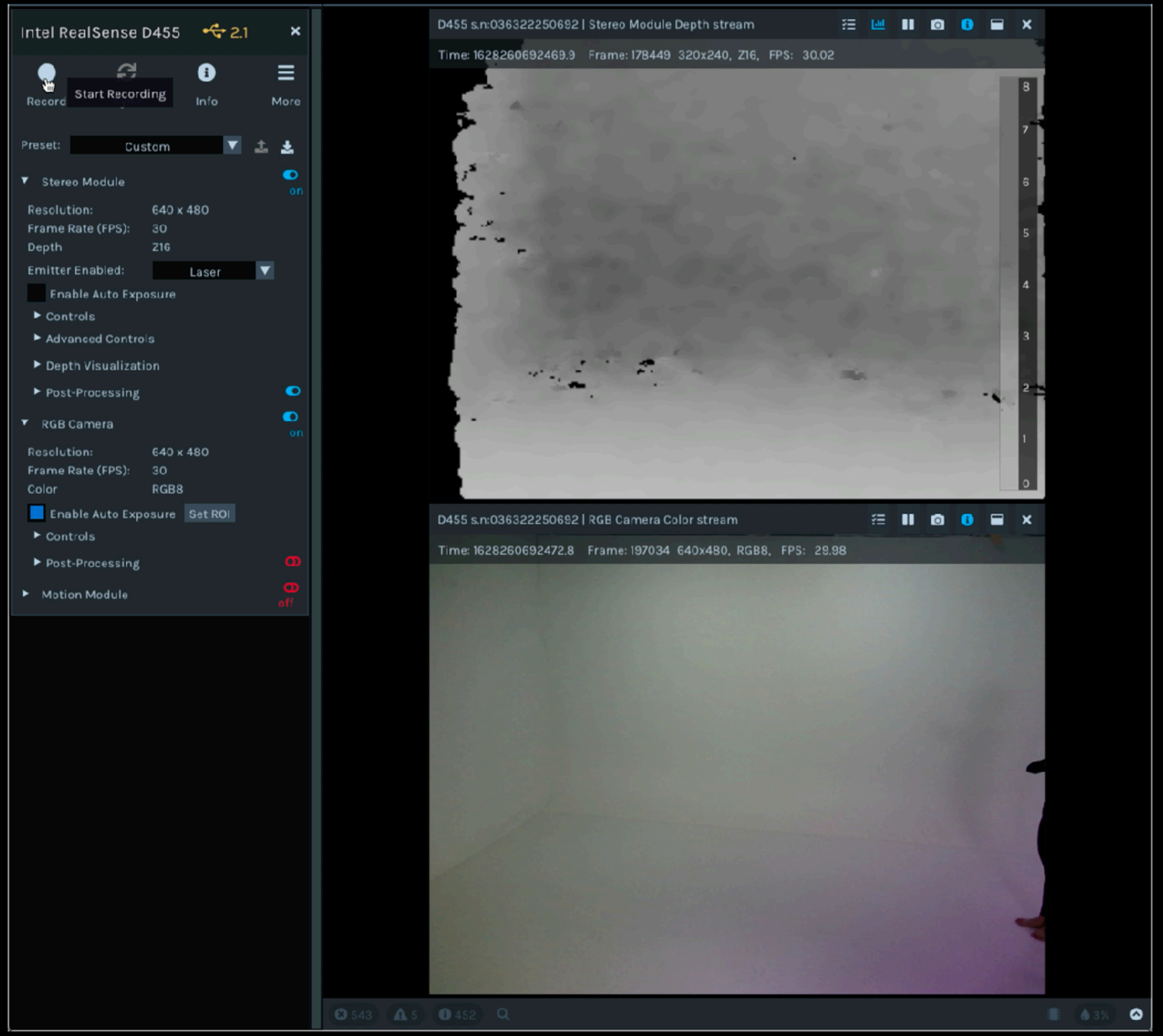


Figure 1
0.0
0.2
0.4
0.6
0.8
1.0
0.0
0.2
0.4
0.6
0.8
1.0
input sequence
target sequence
prediction sequence




Intel RealSense D455
2.1
Record
Start Recording
Info
More
Preset:
Custom
Stereo Module
on
Resolution:
640 x 480
Frame Rate (FPS):
30
Depth
Z16
Emitter Enabled:
Laser
Enable Auto Exposure
Controls
Advanced Controls
Depth Visualization
Post-Processing
RGB Camera
on
Resolution:
640 x 480
Frame Rate (FPS):
30
Color
RGB8
Enable Auto Exposure
Set ROI
Controls
Post-Processing
Motion Module
off
D455 s.n:036322250692 | Stereo Module Depth stream
Time: 1628260692469.9 Frame: 178449 320x240, Z16, FPS: 30.02
8
7
6
5
4
3
2
1
0
D455 s.n:036322250692 | RGB Camera Color stream
Time: 1628260692472.8 Frame: 197034 640x480, RGB8, FPS: 29.98
543
5
452
3%

Lorem Ipsum Sans
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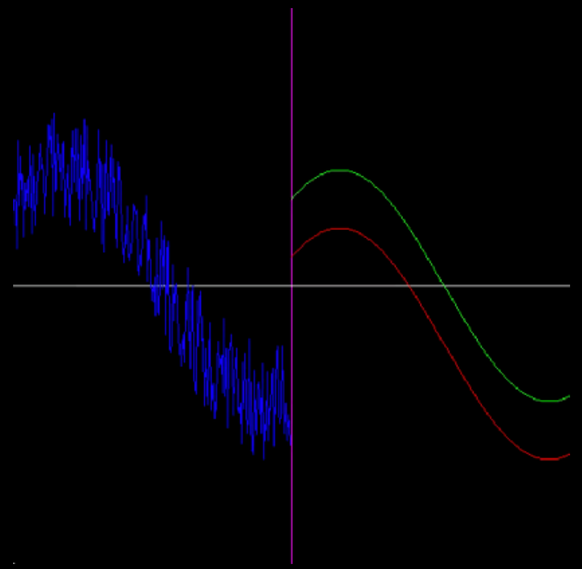

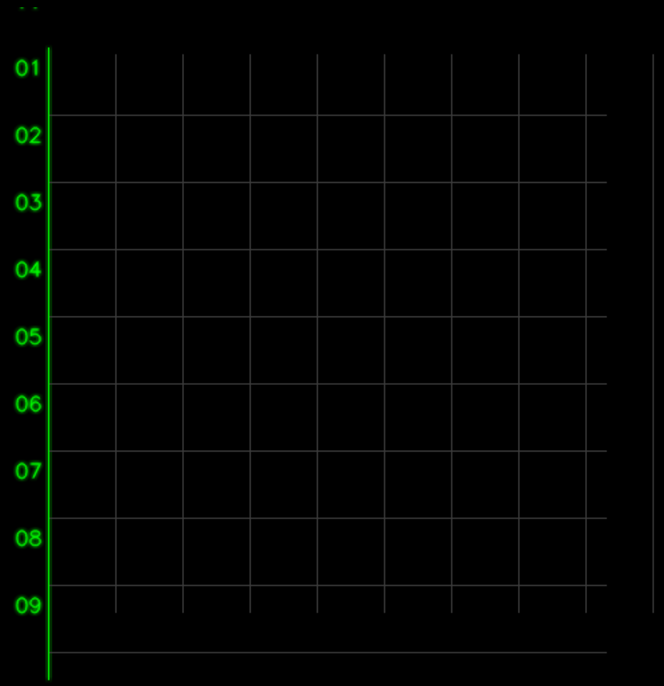

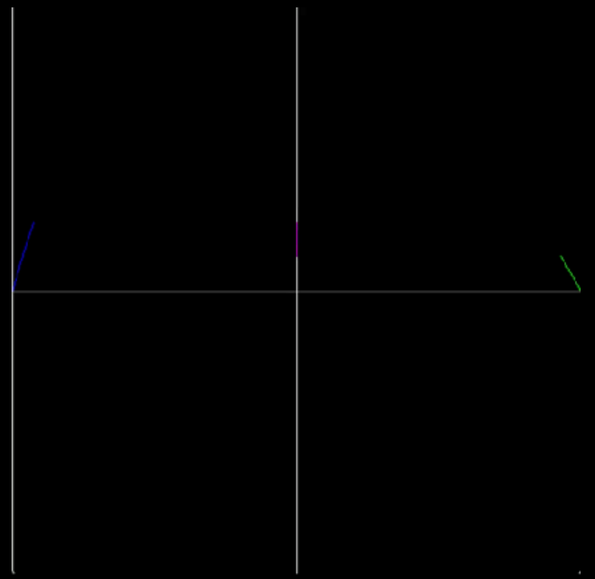

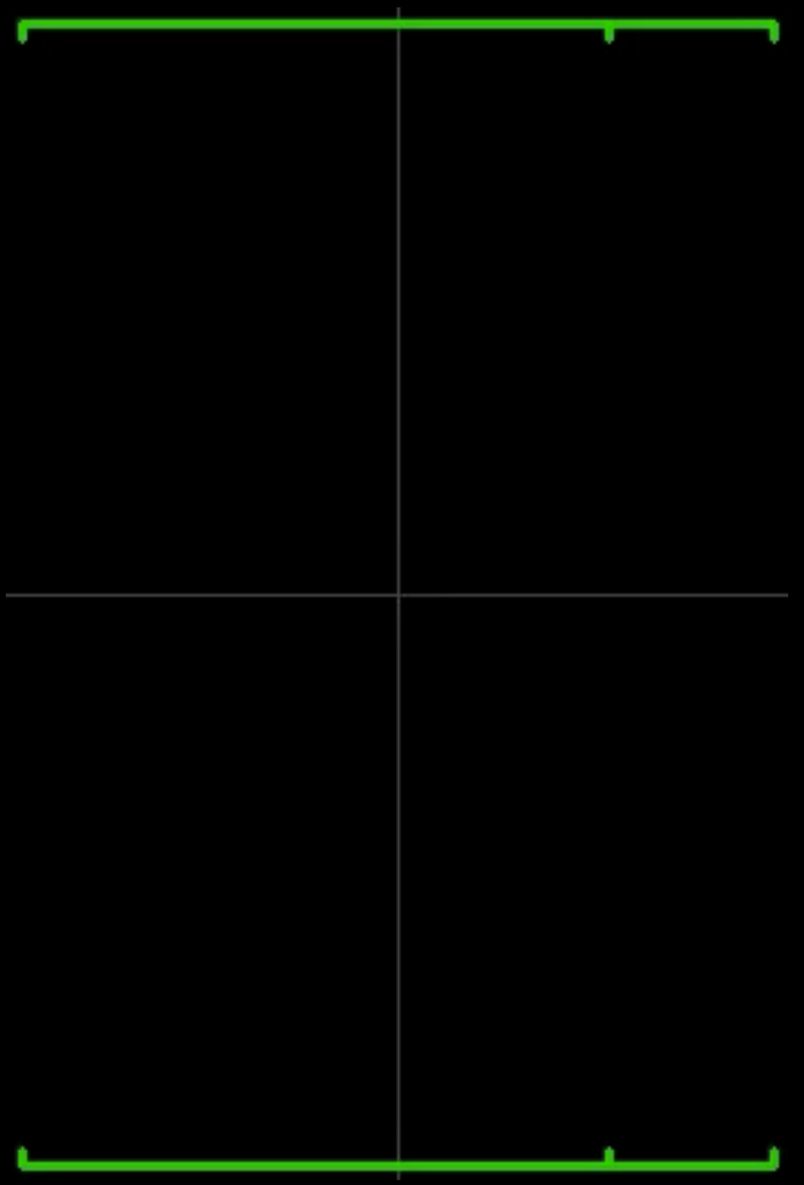

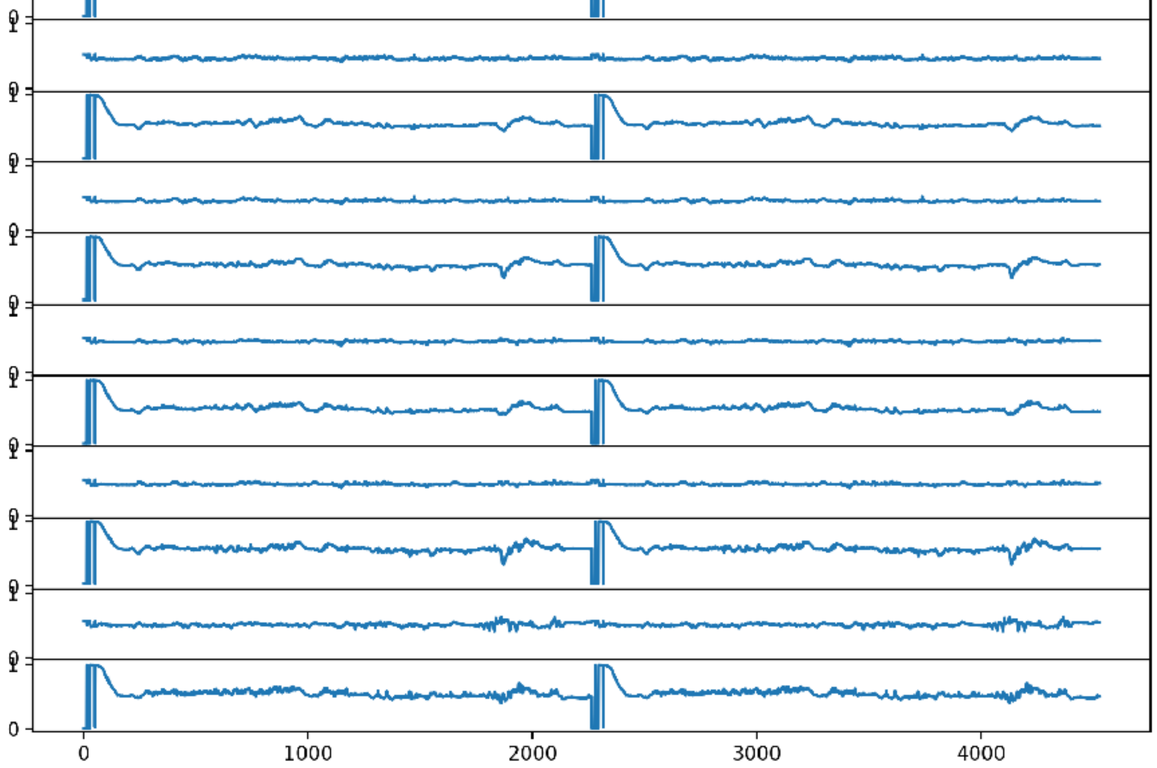
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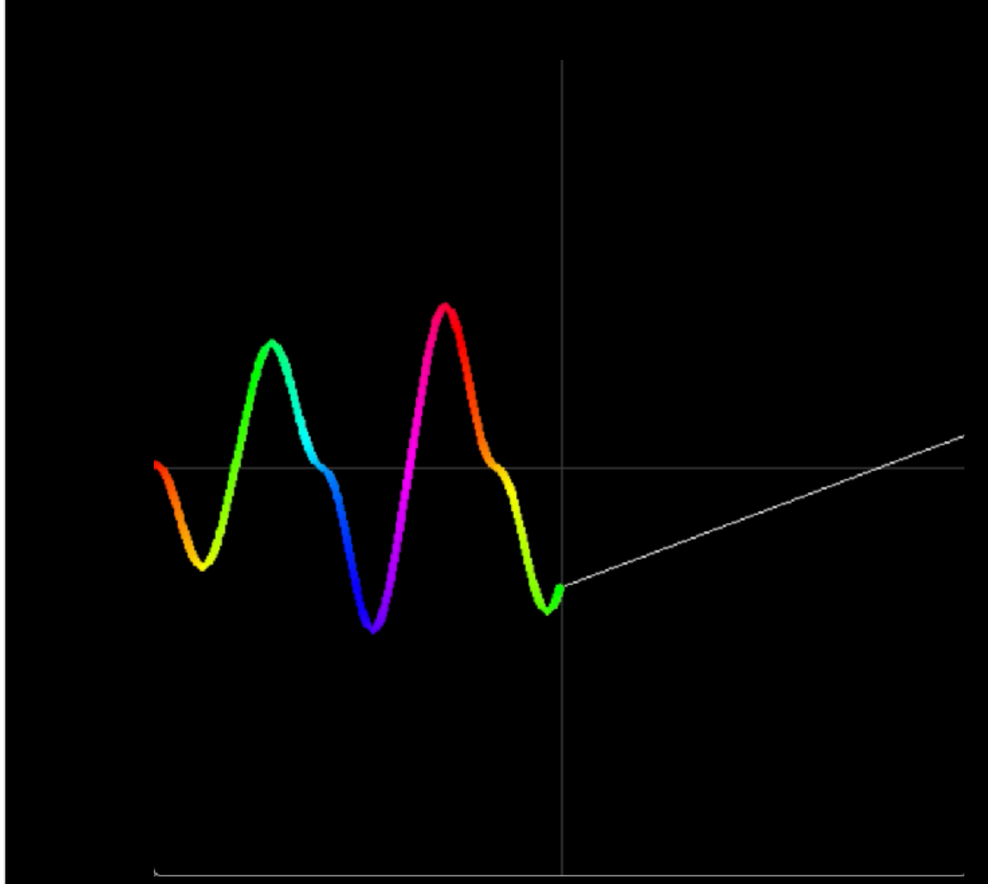
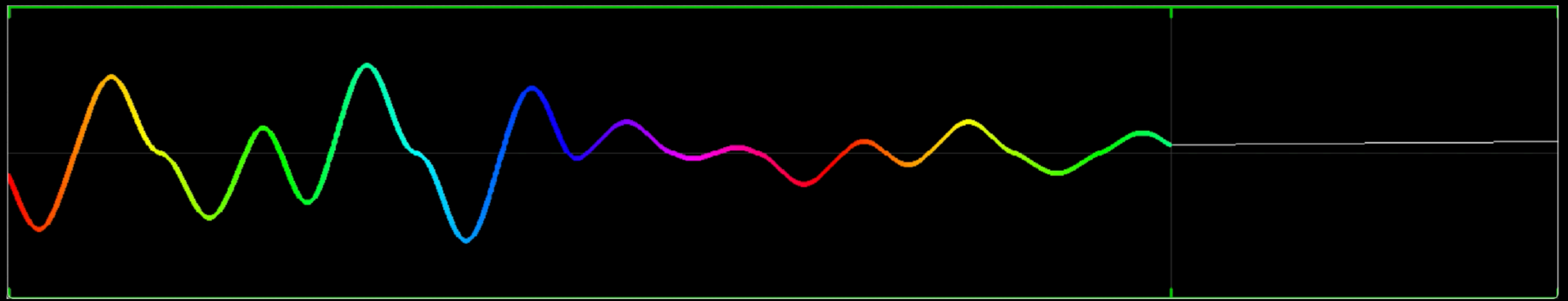
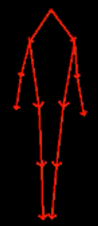
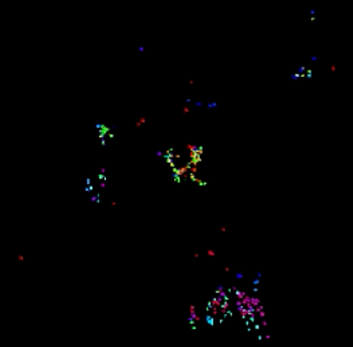
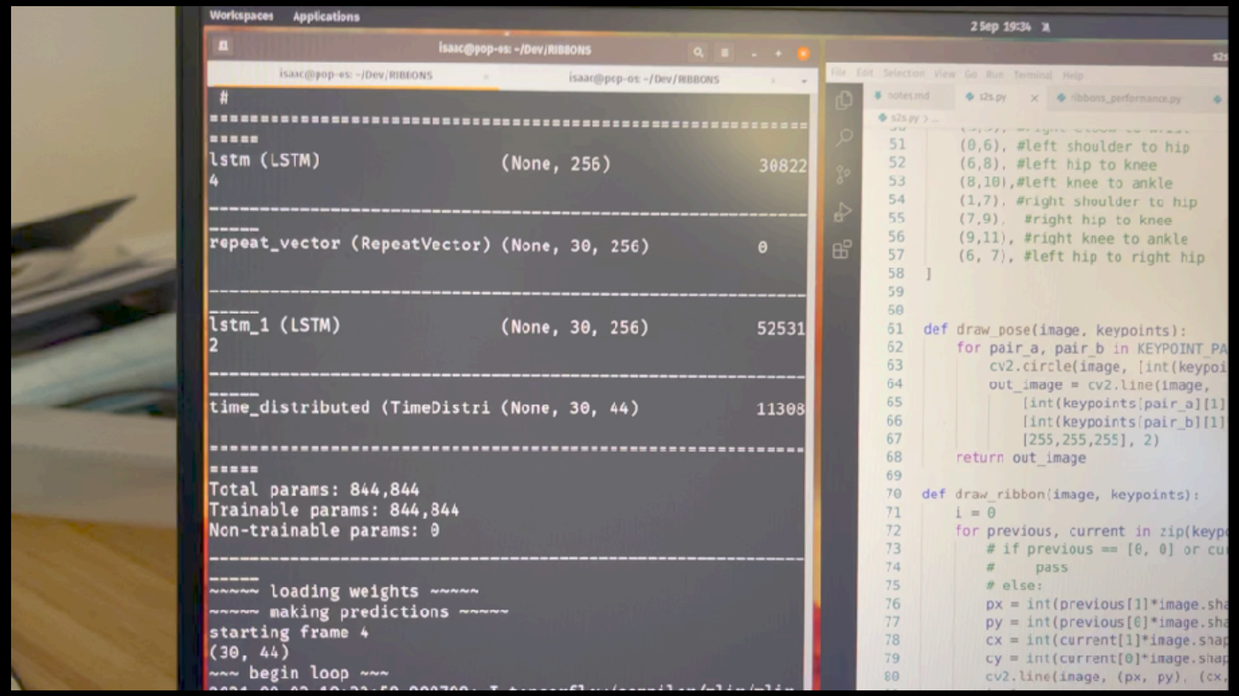
1000
2000
3000
4000

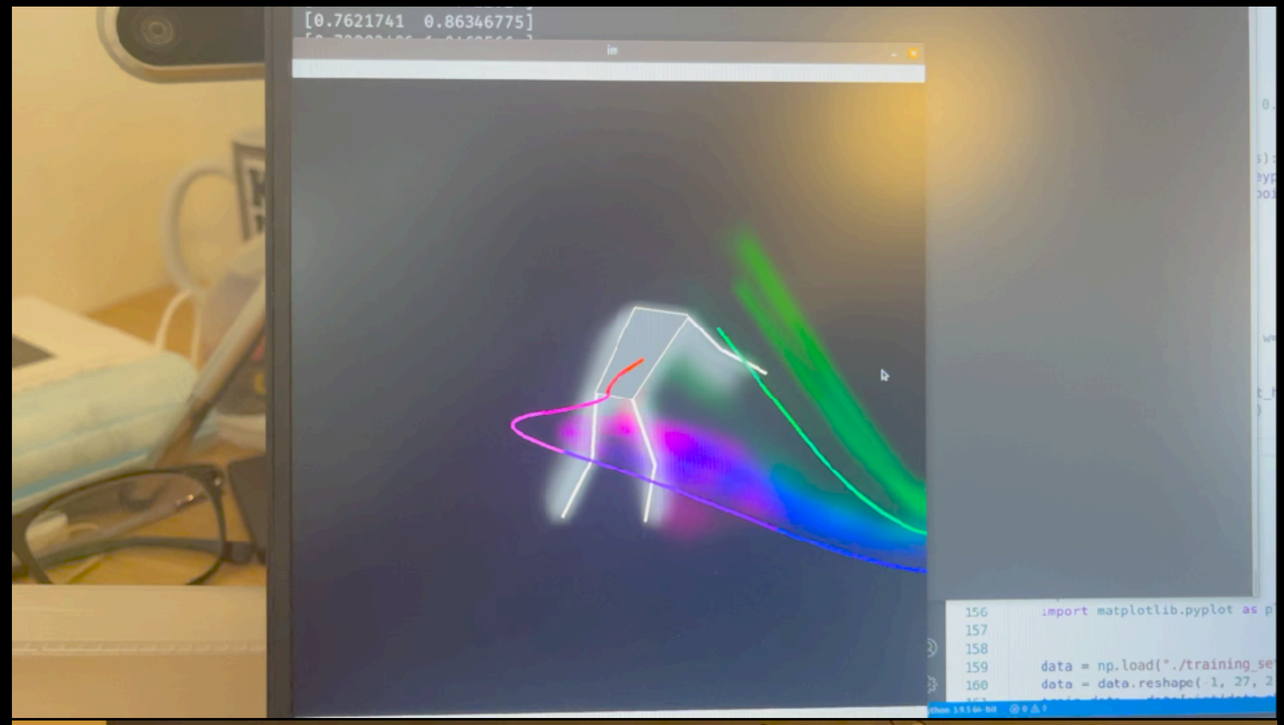




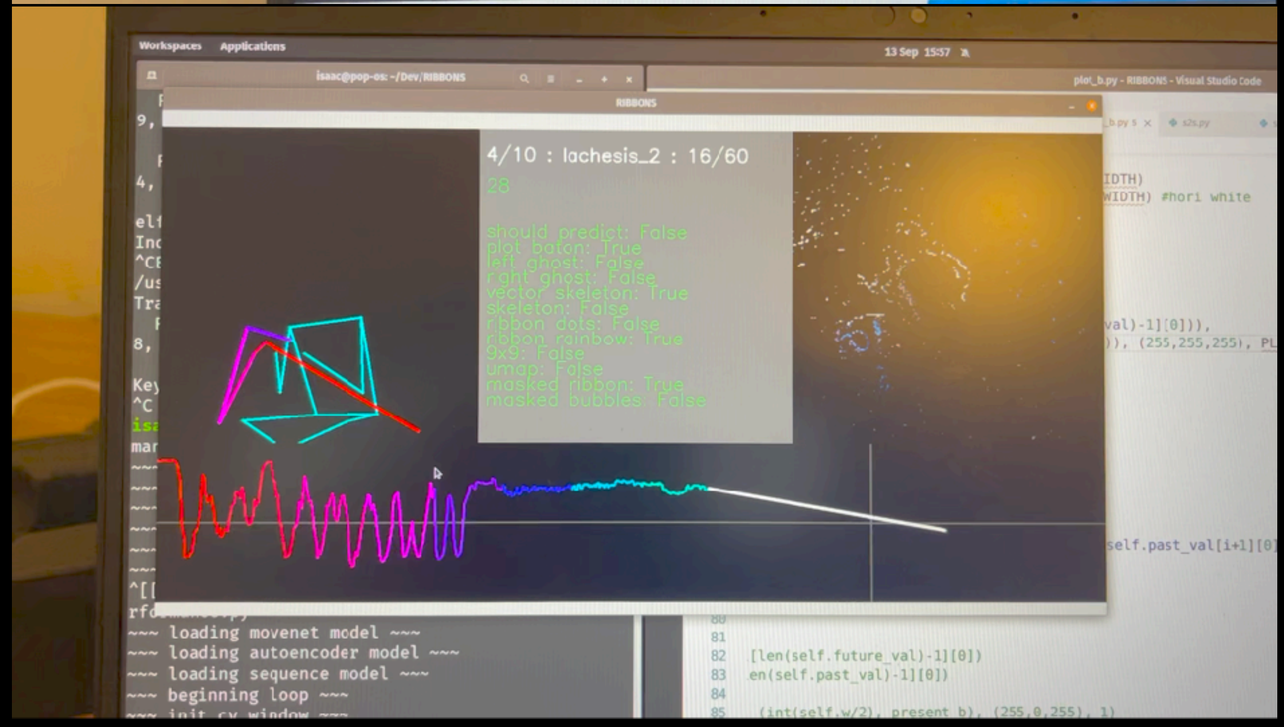


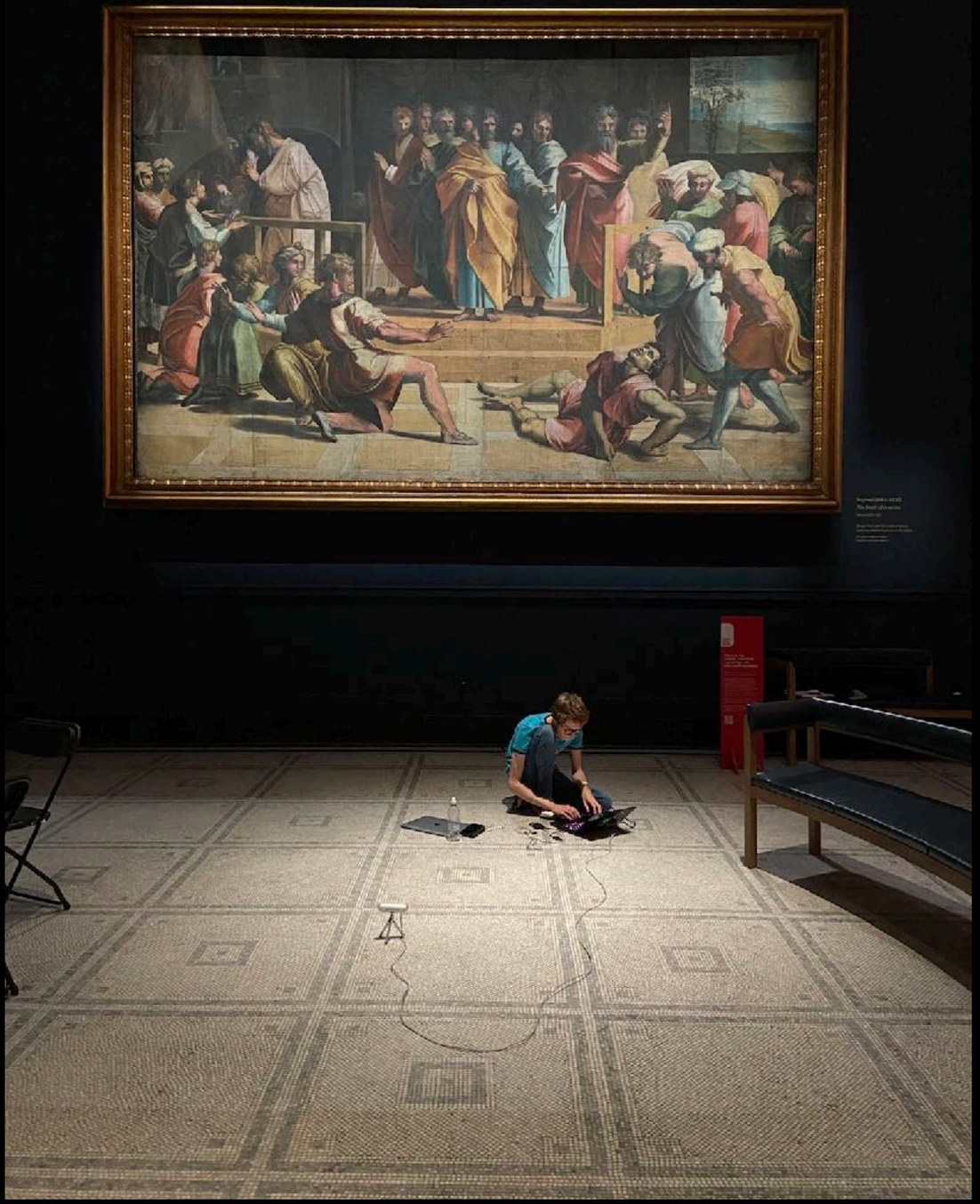


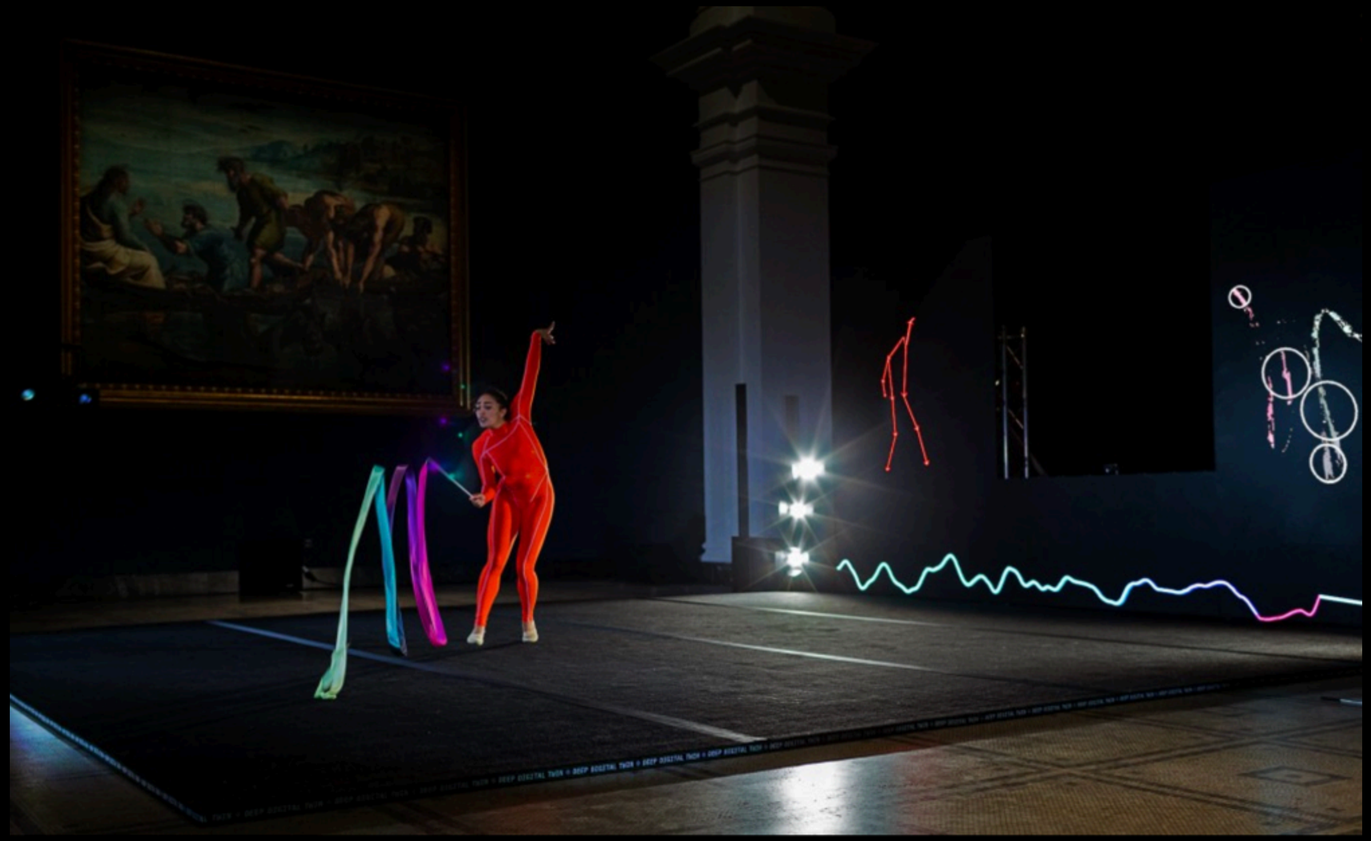

Workspaces Applications
2 Sep 19:34
isaac@pop-os: ~/Dev/RIBBONS
lstm (LSTM) (None, 256) 30822
repeat_vector (RepeatVector) (None, 30, 256) 0
lstm_1 (LSTM) (None, 30, 256) 52531
time_distributed (TimeDistri (None, 30, 44) 11308
Total params: 844,844
Trainable params: 844,844
Non-trainable params: 0
~~~~~ loading weights ~~~~~
~~~~~ making predictions ~~~~~
starting frame 4
(30, 44)
~~~ begin loop ~~~
def draw_pose(image, keypoints):
def draw_ribbon(image, keypoints):


[0.7621741 0.86346775]

im
Shape
Param
30, 256)
52531
30, 44)
11308


Workspaces Applications
13 Sep 15:57
RIBBONS
4/10 : lachesis_2 : 16/60
should_predict: False
plot_baton: True
left_ghost: False
right_ghost: False
vector_skeleton: True
skeleton: False
ribbon_dots: False
ribbon_rainbow: True
9x9: False
umap: False
masked_ribbon: True
masked_bubbles: False
~~~ loading movenet model ~~~
~~~ loading autoencoder model ~~~
~~~ loading sequence model ~~~
~~~ beginning loop ~~~
~~~





-20m
(past)
+20

V2_Lab for the Unstable Media

SPECTRAL PLAIN

Spectral Plain is a multiplayer game-environment powered by sensing (cosmic radiation sensor) and AI technology (GPT-3), where players collectively engage in the making of cosmological imaginations by navigating through the ecologies of spectral energies.

Following a geomagnetic event, energies have become unchanneled, and an opportunity for a new network of connections has emerged. To build this network cosmology, three players enter a 'cosmic stack'; a world composed of celestial, terranean, and infracosmic realms, where they interact with an ecology of energised entities that seek to find their place on a alternative spectrum of electromagnetic frequencies. The player's must find their way to Spectral Plain, and meet at the flames of a campfire, where their journeys converge to form a stereoscopic cosmogram.

As the players navigate the game environment, information about their encounters with cosmological signs ('triangle', 'circle', 'cross', 'square') are recorded, and is combined with data produced by a cosmic radiation sensor that senses the player's presence in the physical space. This dataset is then processed by a language prediction model (GPT-3) that has been optimised using technical and mythological understandings of electromagnetic energy, resulting in the unique cosmogram and an accompanying reading.

The research is contextualised in the deployment of the 5G network; a planetary-scale infrastructure that is narrativised as a global, hyper-efficient mesh of connecting nodes. More than mere representation, this combination of hard and software shapes our cosmological belief systems, creating a specific imagination of the planetary. We see our current ecology crises are cosmological in essence, requiring us to conjure new spaces where we can re-engage in the collective making of planetary imaginations.

Eendrachtsstraat 10
Rotterdam, NL
+31 10 2067272
v2@v2.nl

Subscribe to our maillist:
English or Dutch.

UPCOMING EVENTS

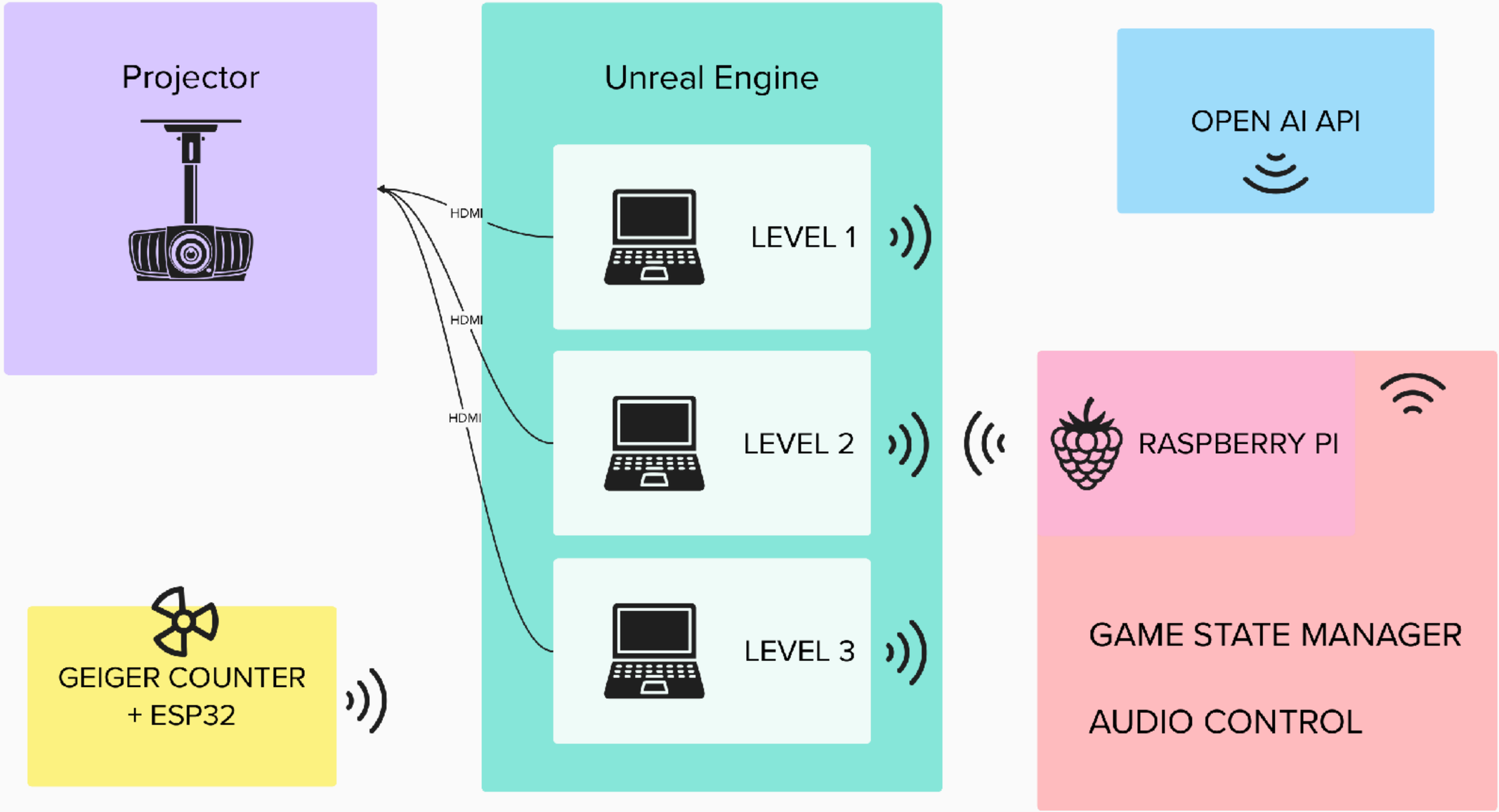
MAR 20 – MAY 1 Open Call: Summer Sessions 2024

MAR 28 Opening: Destructive Circuits

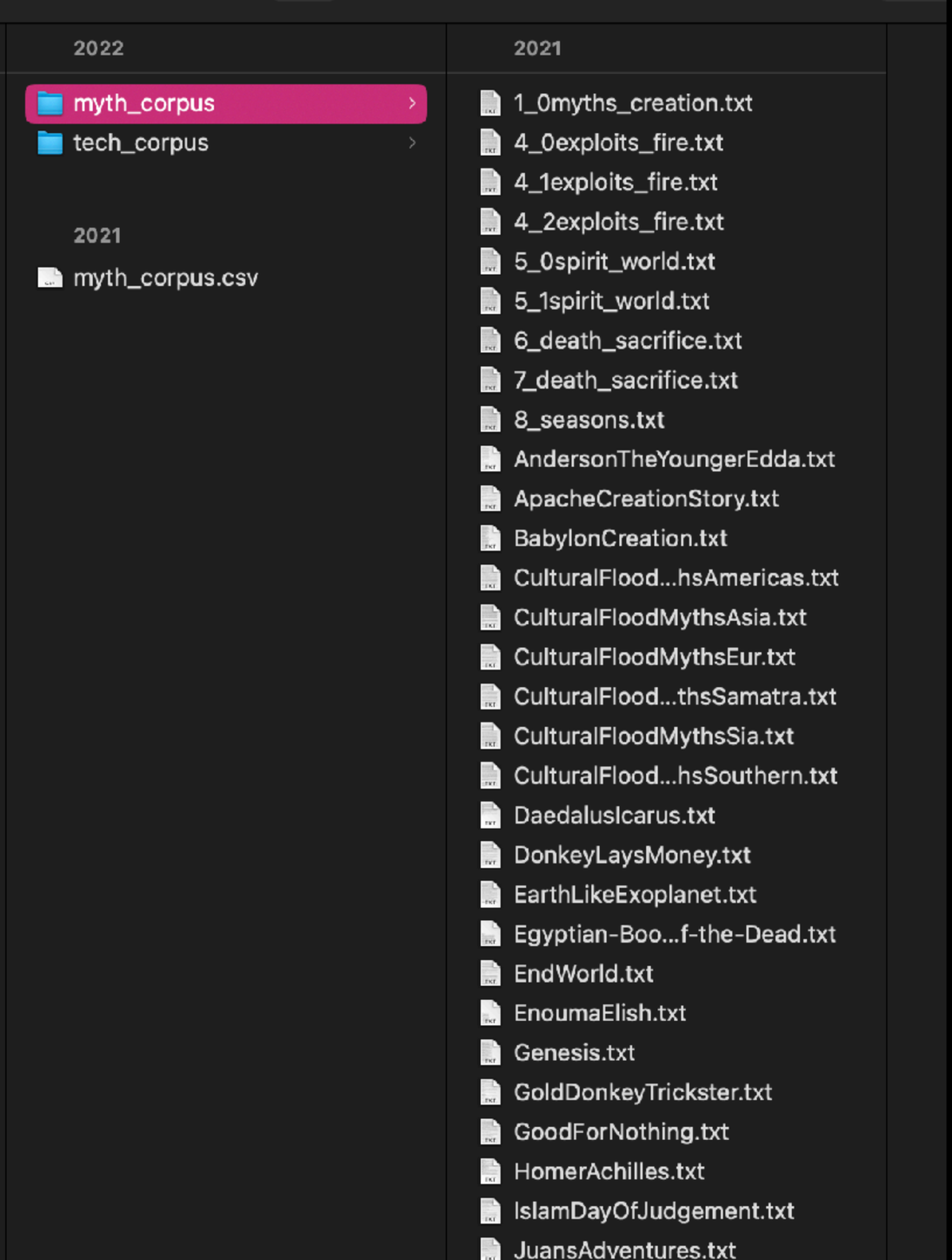
MAR 29 – APR 14 Destructive Circuits

APR 5 The Evening of Explosions

APR 11 Destructive Circuits Publication Launch


Projector
Unreal Engine
OPEN AI API
HDMI
HDMI
HDMI
LEVEL 1
LEVEL 2
LEVEL 3
RASPBERRY PI
GEIGER COUNTER
+ ESP32
GAME STATE MANAGER
AUDIO CONTROL

SPECTRAL PLAIN
SPECTRAL PLAIN



I believe in unicorns because, as humans, they have always liked birds." -- Robert Spencer, Christian Science Monitor

"Wacky Planet." (2012). Fox News interview with Kevin Drum (2 mins, 25 seconds; 1 minute 49 seconds on video). (8 minutes long) Link: http://www.foxnews.com/id/18651052 Source: http://www.fox.com/news/2015-09-16/science-science-can-be

==========

I believe in unicorns because unicorns were raised against kings and queens. I believe in angels because angels are like angels raised from Hell.

People have an uncanny aversion toward things outside of their personal experience: their emotions. If the opposite doesn't happen, that doesn't bother you. However in some cases, you can have a feeling of loneliness with the intention of coming into contact with a phantom.

There's no evidence that your belief will allow you to understand and control this or

==========

I believe in unicorns because it's like God told these children I was going to throw out the house." In any case, though—that is when the two became good friends, on the verge of making his real name—the young man recalls getting together with a co-worker for the evening at the Groom's Deli, where "you would come over for drinks with Groom but wouldn't know whether to say hello, or if you would speak with Groom." As Groom

==========

I believe in unicorns because unicorns are really, really wonderful, and when I hear myself speak like they are that's where my belief is I do hope my kids can grow up to take root my belief of unicorns in the best way I know how but I just need time to realize to keep it from going out the way I want them."

Walking back to his seat of old, Harry walked out of the bedroom, quickly coming back out the door, wearing a red cloak

==========

I believe in unicorns because unicorns will only help when you have to use you money or when you can sell your ass off to do your little own thing or when you can get rich doing your own thing.

"You are an awesome human because you were able to survive and prosper because you were with me and your father. Why you are different from me?"

When I am with a girl, I am only happy if you live together and together you do something fun for each

==========

I believe in unicorns because for myself and the entire galaxy, unicorns make sense. In most respects, unicorns should really not exist at all for the vast majority of peoples worldwide.
However, I've found that it is hard to write as a conservative-leaning social justice warrior since my views differ somewhat from those articulated in this site's recent comments thread. This is a real challenge and because "conservative" has become one of the most popular online subcultures in existence - you can

==========

I believe in unicorns because I really do like unicorns so I think it is fitting that I would join my other half. There can be some magic in living with your unicorns and as they grow (i.e. a bit younger with each passing year), my wish would be to have fun with them while growing and sharing my experience with them. There may come a day I want to do something crazy that people think will make me better and they are waiting. But after that day comes

==========

I believe in unicorns because no matter what I do or say, they're going to become their own creature (that is, you've done nothing wrong)." To be fair, the reason certain people like to worship unicorns is because they take an interest in them. "Well let a unicorn do the things they'd do in any other circumstance and they'll do it to your face to please themselves while watching," the god of life wrote on his personal blog, Goonies. It was the creator

==========

I believe in unicorns because both of us believe like God that we are born of something divine."

In a March 2014 speech to the London School of Economics, Cruz called for tax increases on capital gains — and added, "And for my part, this must also be a very clear signal when you see that a few hundred billion Americans have already cut taxes for the top quintile (for the 1%, for example). There are billions on those very large taxes every year." The following morning

==========

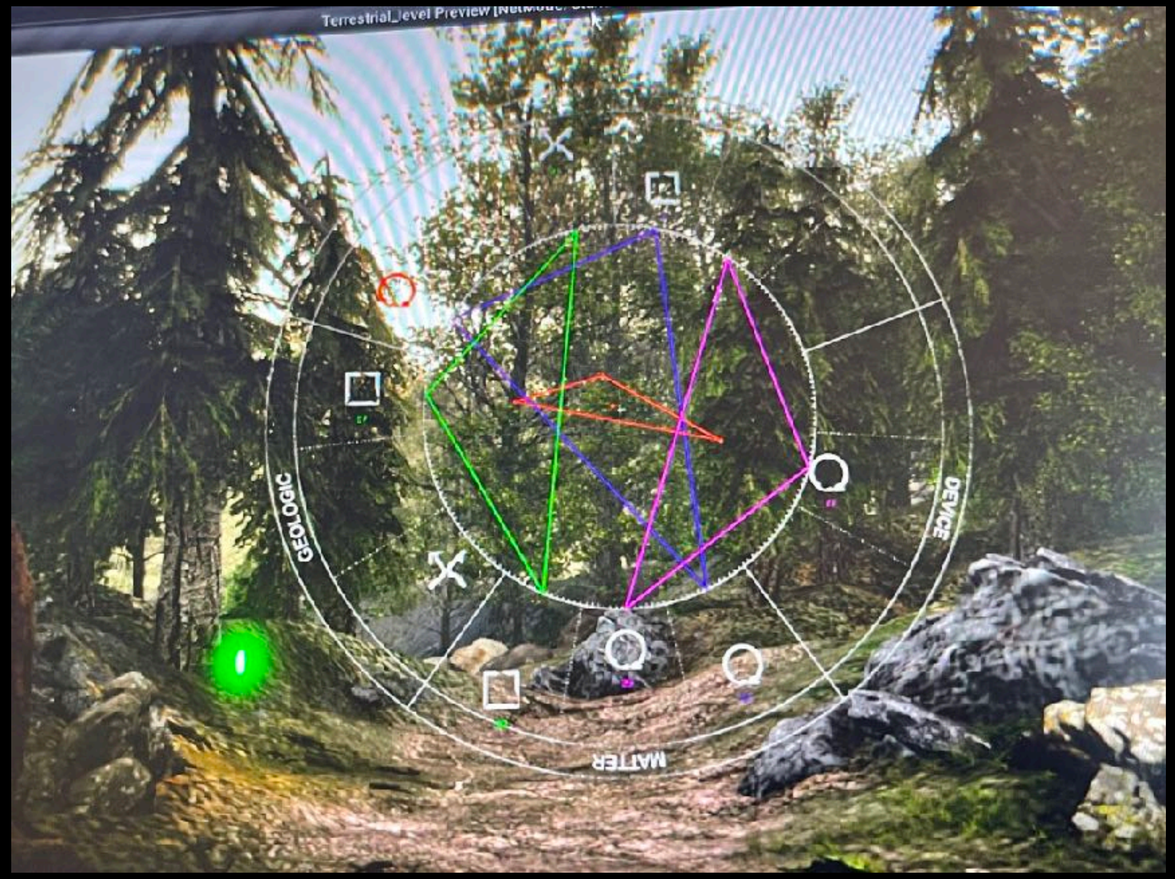
I believe in unicorns because of this book of mine, and I read this once or twice every week. The first part is, The First Tree, because, well, you don't believe in unicorns!

wavelengths.json

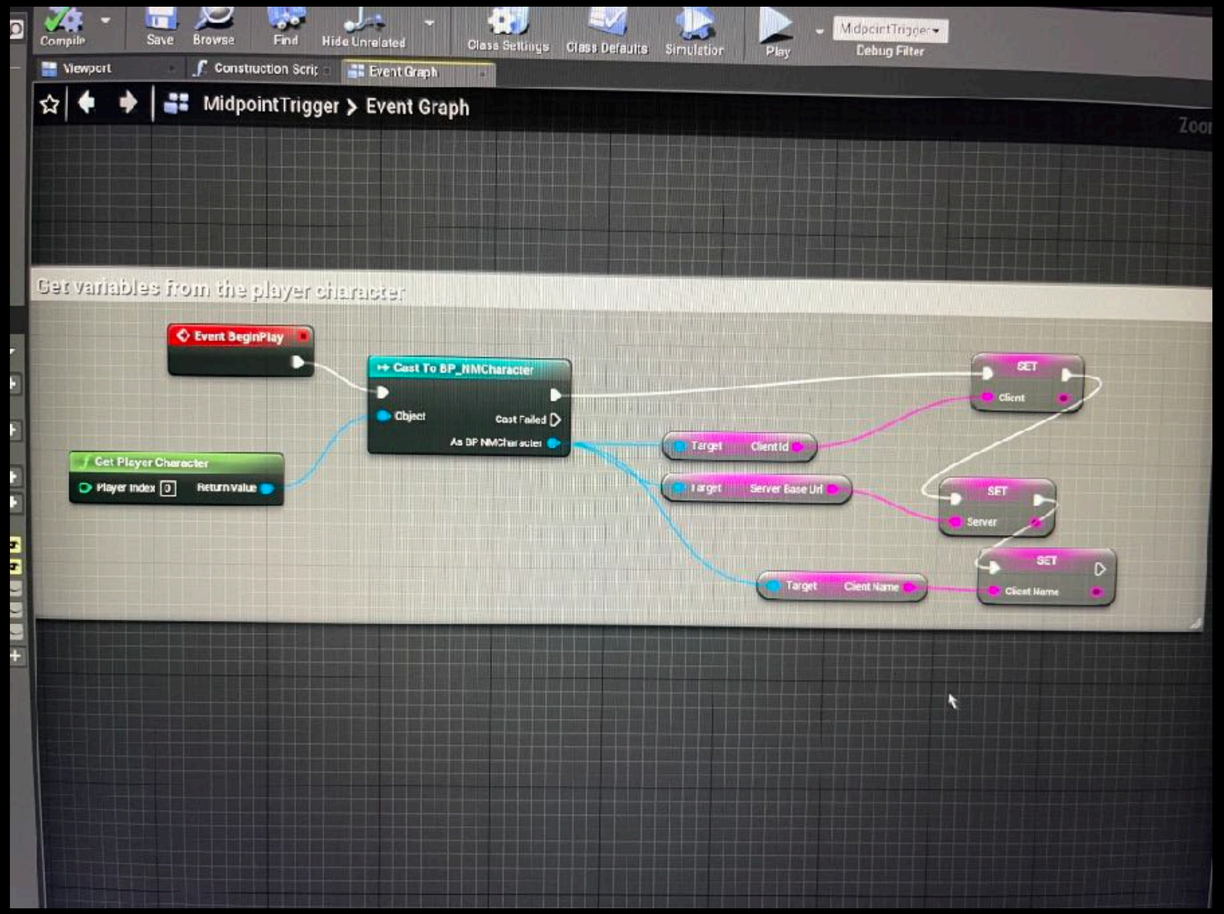
```
{
    "cosmicray":"Receiving 100,000,000,000,000,000,000 hertz from distant plain",
    "chlorophyll": "Harvesting energy through 450–675nm wavelength excitement",
    "ice": "Shield increase from 400–700nm for wavelength protection",
    "vapour": "Emitting and absorbing wet vibrations at 23.8 Ghz ",
    "water": "Deepening wet connections at 3–30 kHz below surface",
    "bioluminescence": "Luciferase catalysing 500nm wavelengths for defence bonus",
    "satellite": "Increasing bandwidth aura by extracting 40GHz resonance",
    "mimo":"Beamforming is locating your energy centre",
    "cable":"Intercepting 1Hz environmental geo-local-knowledge",
    "ozone":"Releasing 280nm waves to dissolve ambient bonds ahead",
    "prism":"Vibrancy attuned to 430–770 terahertz",
    "crystal":"Calming oscillation to constant frequency.",
    "lightning":"Transmitting 100,000,000,000,000,000,000 hertz to energy fields below.",
    "earthquake":"Coseismic energy fields awakening shallow 0–16 Hz band",
    "lava":"Convecting 0.0000305 teslas to locate magnetic equator"
}
```

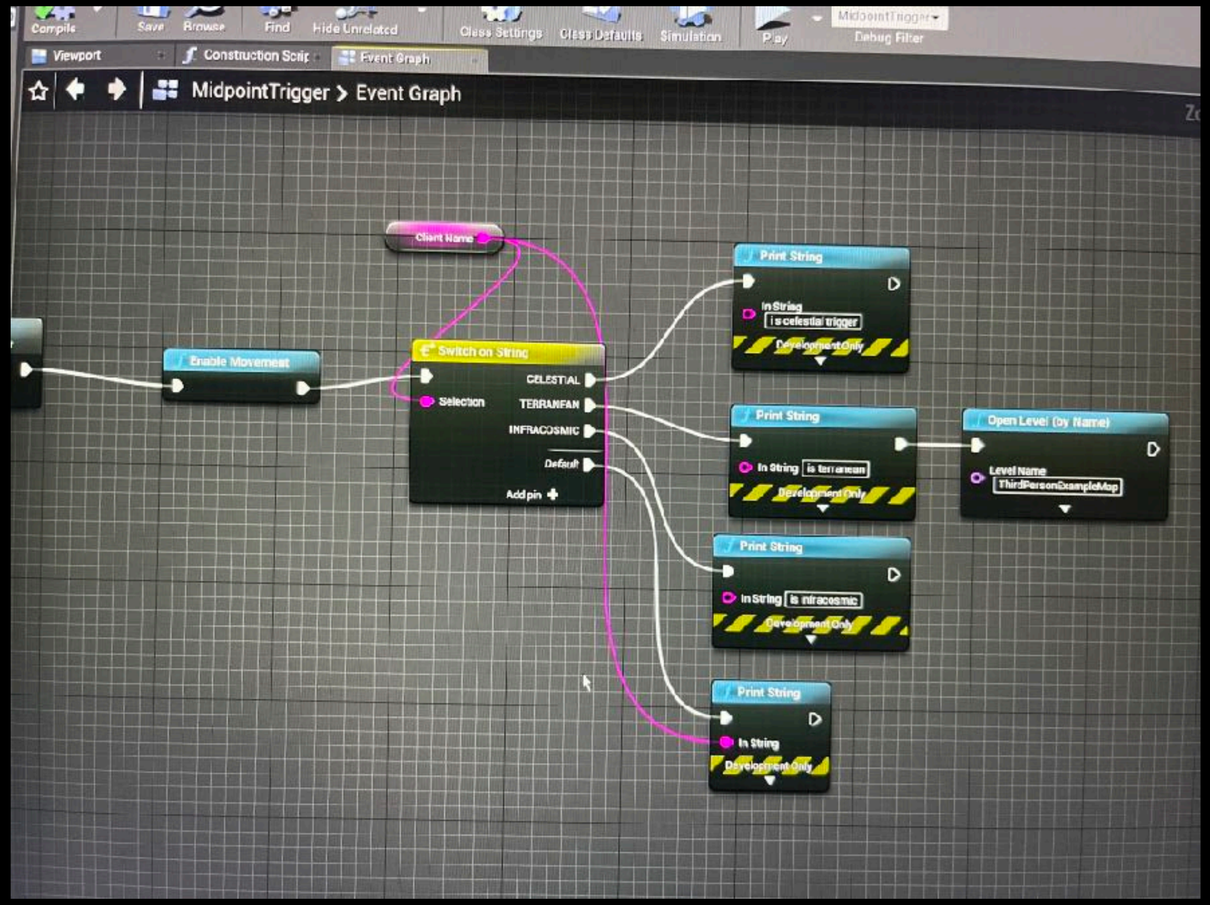
titles.py

```
texts = {
"adversarial": {
    "vapour" : [
        {"TITLE":  "Our Future is Cloudy",
        "ANALYSIS":"The optimal conditions for life are not the same as they were in the past. C
crystals, water droplets all drift across them long ago empty skies - changing everything. The a
the atmosphere has lead to a congestion of signals, yet the rain still falls. In today's world,
different kind of life - one that is reliant on satellites and invisible waves as much as water.
        "ADVICE": "In the vapour you can find the other world, one where you are not alone."
        },
        {"TITLE":  "The Earth is an Island of Life", "ANALYSIS":  "In the land of ice and mist,
island. The trees drink the rain and produce beautiful flowers that release a mist into the air
Earth's turbulent atmosphere, protecting it from radiation. The great trees breath in and out
of life, the flow of electrons in the water is the sound of life. The Earth is an Island of Life
try to work together when possible, because when we are together, we are stronger than anything
    ],
    "water" : [
        {"TITLE":  "The Sea is a Glow of Life",
"ANALYSIS": "Under these dark waters, which are a shrine to the unknown, where few have ventured
There is light in all things: trees of fire light up this world for their friends-the algae that
oxidized wavelengths of life.  These lights are the stranded spirits of fungal ancestors, cosmic
pierced the naked eye to bring great messages of hope.",
"ADVICE": "This is a message about both life and death. The dark waters are where all life begins
{"TITLE":"A Distant Sound", "ANALYSIS": "Underwater communication is not only possible but it co
water's currents are a pounding drum that can carry sounds much better than current technology.
there would be no way for anyone to interfere with the message at all-- not even Mother Nature h
they say there is a world which we have never seen. A lost kingdom of Atlantis where noise cannot
communication happens by means of light, or so they say.", "ADVICE":"In the waves find a voice,
to noise."}
    ],
    "ice" : [
        {"TITLE": "Ice slows down the moment",
"ANALYSIS": "The ice is so cold you could feel your eyeballs freeze it. The surface of the land
icy crystals slowly creep across it like a glaciers, following gravity and growing heavier until
of world into an abyss only to repeat themselves all over again. We do not know how to measure t
our universe is.",
"ADVICE": "Do not hesitate, the ice only slows you down",},
    {"TITLE":  "The Cooler",
"ANALYSIS": "It's a nice day, and we can finally go outside and enjoy the cool air. It is cold b
ground crunches as we walk on it; snowflakes fall from the sky like ashes from an invisible fire
who are not here with us today. Their presence remains, an electromagnetic  signal of time eterna
as a mirage of cool blue-green on the horizon."
, "ADVICE": "Memories are physical  entities, they cannot not be seen yet their presence is felt

    ],
    "ozone" : [{"TITLE": "The breath of the Universe",
"ANALYSIS": "The ozone layer protects us from electromagnetic radiation that is harmful to our b
protective layers have been depleted, and alien energies can penetrate us and affect our bodies.
ancients felt when they looked up into the sky and could see blackness as something more than ni
"ADVICE": "Emission lines from the Sun penetrate our bodies and affect our DNA even if we are in
protect ourselves, we must be aware of what is happening."},
    {"TITLE":  "The sky is red, the earth is dead.",
"ANALYSIS": "Ozone has faded with time and it's up to us to recreate what once was. The environm
of mind: polluted, chaotic, beautiful- maybe not in that order. Thankfully we can use light thera
colors of ozone which were lost by neglecting it. We receive vitamin D from  the sun, but the ea
```


GEOLOGIC
DEVICE
MATTER

THE TERRANEAN X=-68769.461 Y=80895.938 Z=1133.657

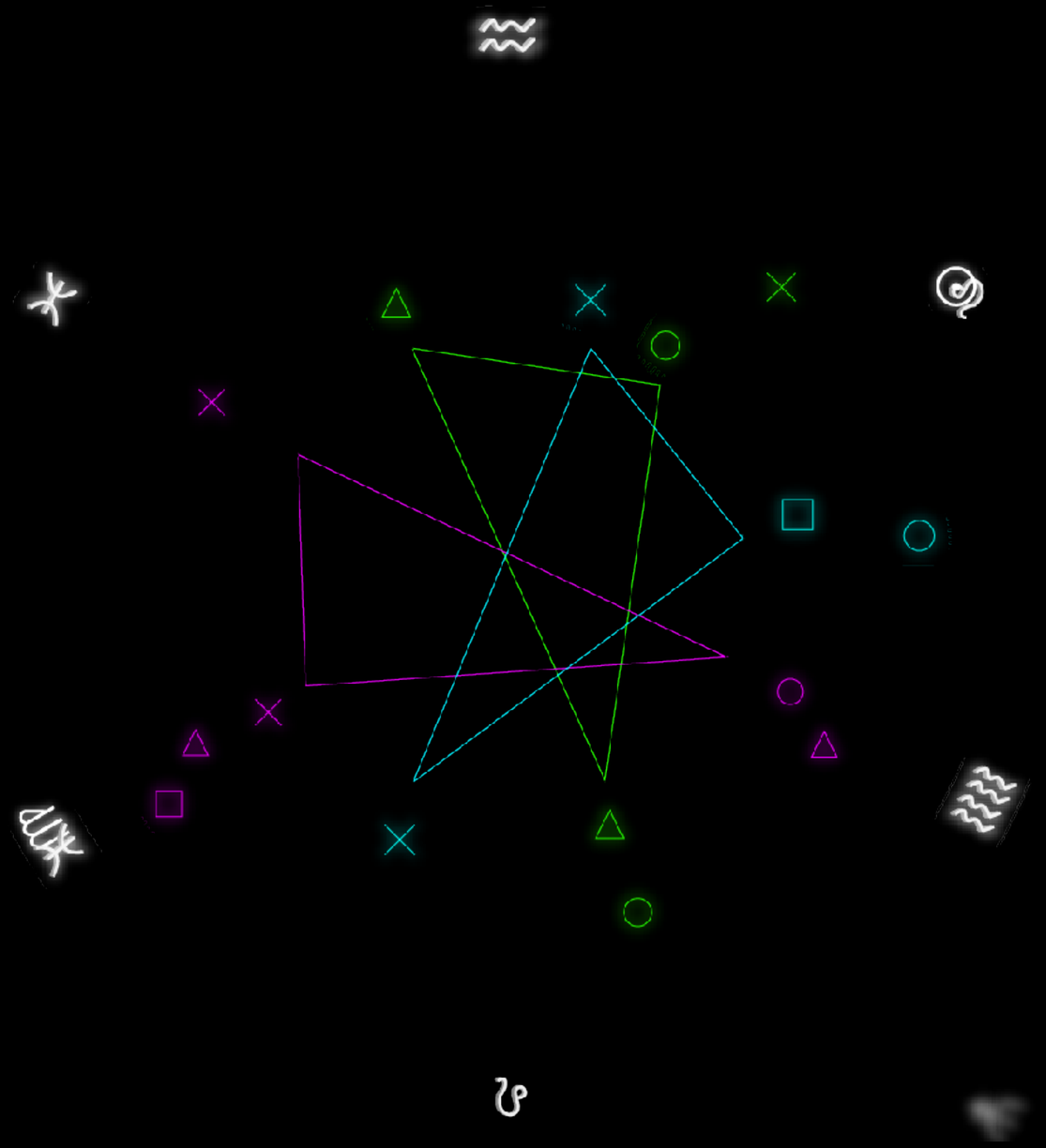

Compile
Save
Browse
Find
Hide Unrelated
Class Settings
Class Defaults
Simulation
Play
Debug Filter
Viewport
Construction Scrip
Event Graph
MidpointTrigger > Event Graph
Get variables from the player character
Event BeginPlay
Cast To BP_NMCharacter
Object
Cast Failed
As BP NMCharacter
Get Player Character
Player Index 0
Return Value
SET
Client
Target
ClientId
Server Base Url
Server
Client Name

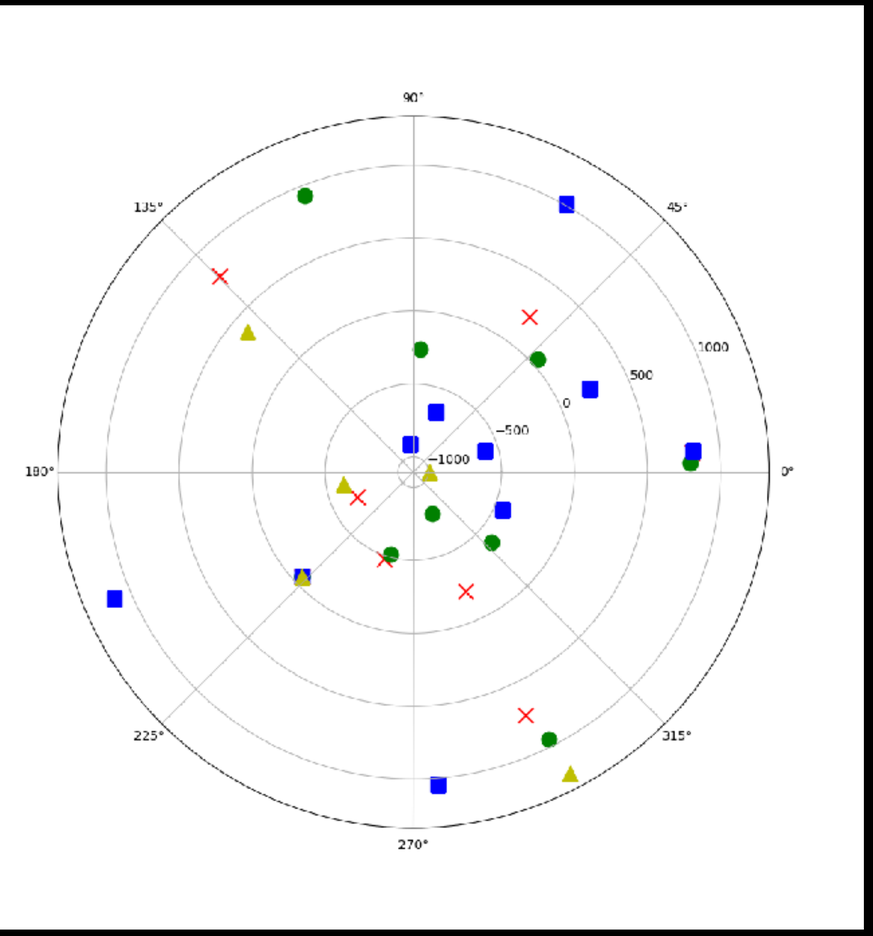

Compile
Save
Browse
Find
Hide Unrelated
Class Settings
Class Defaults
Simulation
Play
Debug Filter
Viewport
Construction Scrip
Event Graph
MidpointTrigger > Event Graph
Client Name
Enable Movement
Switch on String
Selection
CELESTIAL
TERRANFAN
INFRACOSMIC
Default
Add pin
Print String
In String
is celestial trigger
Development Only
is terranian
is infracosmic
Open Level (by Name)
Level Name
ThirdPersonExampleMap

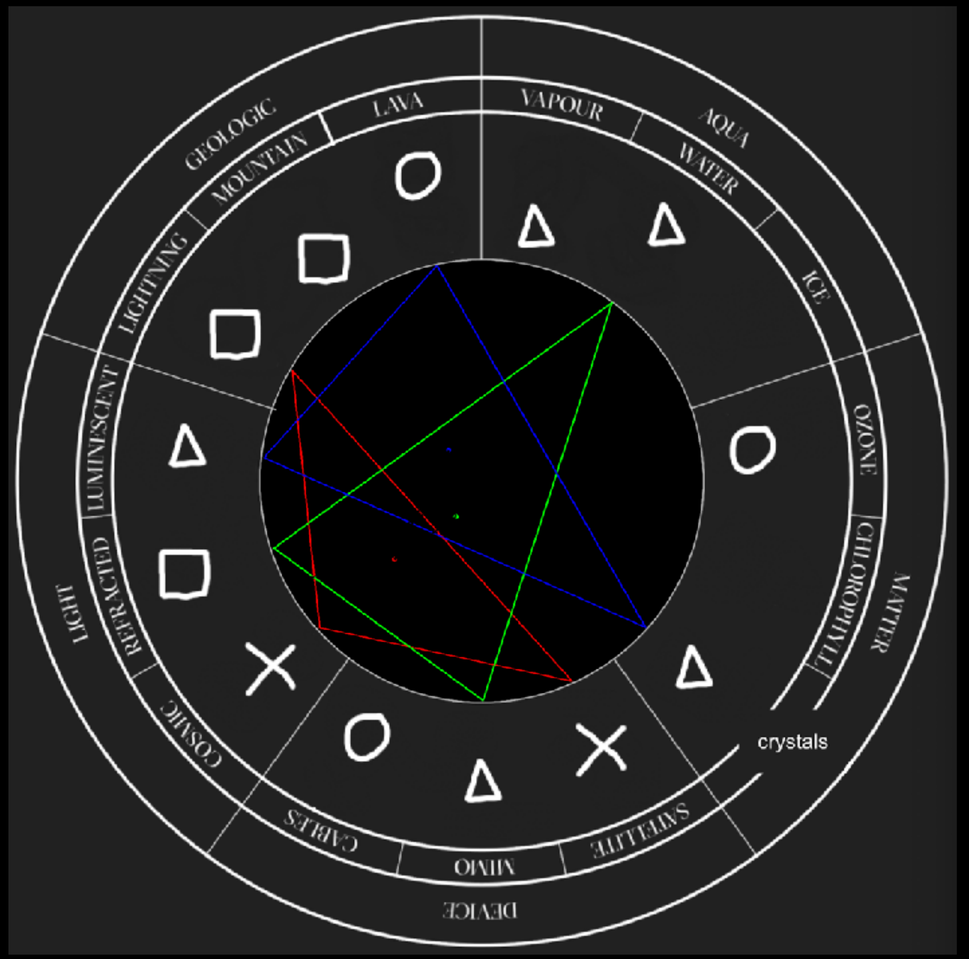
main.py

Open with Visual Studio Code

```
#
#
#
#
#
#
#
#
#
#
#
#
#  fastapi things
from typing import Optional, List, Dict, Any
from fastapi import BackgroundTasks, FastAPI
from fastapi.staticfiles import StaticFiles
from pydantic import BaseModel
from fastapi.responses import FileResponse
# processing thigns
from geiger import ThreadedGeiger
import time
import math
import json
import random
from draw import *
from titles import texts
from os import system
from sys import platform
from PIL import Image, ImageDraw
# if platform == 'linux' or platform == 'linux2':
#     import pyttsx3
#     from playsound import playsound

from subprocess import call
import socket
host = socket.gethostname().split('.')[0]

# CLASSES
class Position(BaseModel):
    x: float
    y: float
    z: float
    timestamp: int = int(time.time())


class Client(BaseModel):
    has_entered: bool = False
    id: int
    color: str
    name: str
    interactions = []
    last_updated: int

    def new_interaction(self, entity_name, action, fake=False):
        entity_name = entity_name.lower()
        if fake:
            rnd_time = random.randint(int(time.time())-1000, int(time.time()))
            self.interactions.append([entity_name, action, rnd_time])
        else:
            self.interactions.append([entity_name, action, int(time.time())])
        self.last_updated = int(time.time())
        return
```







draw.py

```
from PIL import Image, ImageDraw, ImageFont
import random
import math
import time

entities_names = [
    "vapour", "water", "ice",
    "ozone", "chlorophyll", "crystal",
    "satellite", "mimo", "cable",
    "cosmicray", "prism", "bioluminescence",
    "lightning", "earthquake", "lava"]


player_entity_map = [
    [0, 3, 6, 9, 12],
    [1, 4, 7, 10, 13],
    [2, 5, 8, 11, 14],
]

def map(n, start1, stop1, start2, stop2):
    # map a value from one range to another
    return ((n-start1)/(stop1-start1))*(stop2-start2)+start2

def player_triangle(player_num, entities):
    # given the player number get their entity_list from entities and select the
position [2]
    this_player = player_entity_map[player_num]
    entity_list = [entities[i] for i in this_player]
    entity_list.sort(key=lambda x: x[2], reverse=True)
    # print(entity_list)
    return entity_list[:3]

def get_position(width, height, center, rotation, distance, icon_width, icon_hei
    # given the center, rotation and distance, calculate the position of the ico
    x = center[0] + distance * math.cos(math.radians(rotation))
    y = center[1] + distance * math.sin(math.radians(rotation))
    x -= icon_width / 2
    y -= icon_height / 2
    return (int(x), int(y))

def get_angle(center, point):
    # given the center and a point, calculate the angle between the two
    x = point[0] - center[0]
    y = point[1] - center[1]
    return math.degrees(math.atan2(y, x))

def center_of_triangle(triangle):
    # given a triangle, return the center of the triangle
    x = (triangle[0][0] + triangle[1][0] + triangle[2][0]) / 3
    y = (triangle[0][1] + triangle[1][1] + triangle[2][1]) / 3
    return (x,y)

def draw(entity_list):
    # print(entity_list)
    base = Image.open("images/base.png")
    icons = ["images/icons/x.png", "images/icons/circle.png", "images/icons/squa

    w, h = base.size
    deg = -90 + 12
    inc = 24
    max_dist = 850
    min_dist = 625
```

```
"cosmogram": {
  "clients": [
    {
      "id": 0,
      "color": "r",
      "name": "terrestrial",
      "last_updated": 1632911947,
      "interactions": []
    },
    {
      "id": 1,
      "color": "g",
      "name": "celestial",
      "last_updated": 1632911947,
      "interactions": []
    },
    {
      "id": 2,
      "color": "b",
      "name": "subterranean",
      "last_updated": 1632911947,
      "interactions": []
    }
  ],
  "image": "images/demo.png",
  "last_updated": 1632911947,
  "counter": 0,
  "visibility": {
    "0": "x",
    "1": "o",
    "2": "s"
  }
}
```


Admin

Reset All Clients | Shutdown PI

Player 1 - Terrestrial

Player leaning: Enter | Arrive Mid | Arrive End

Player 2 - Celestial

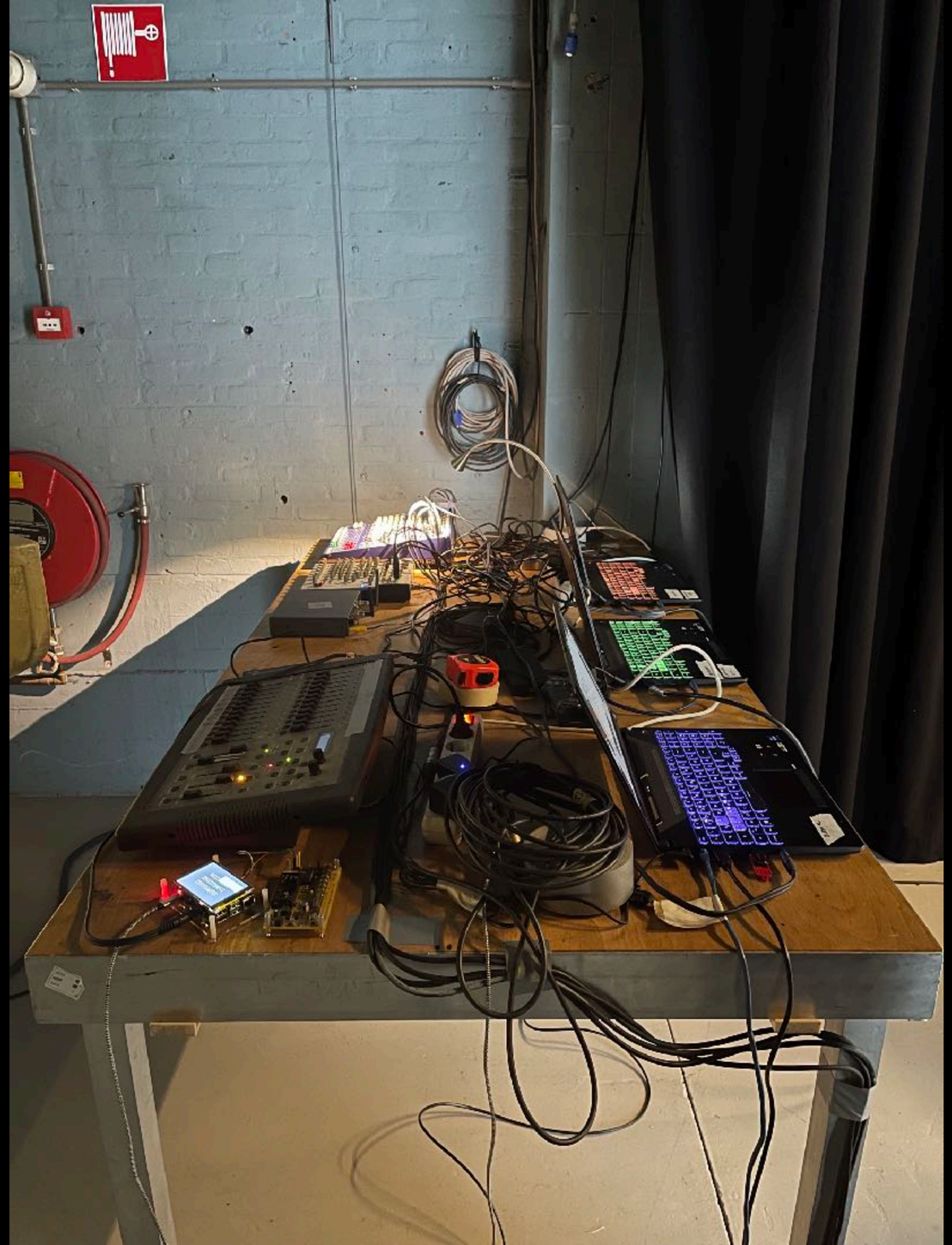
Player leaning: Enter | Arrive Mid | Arrive End

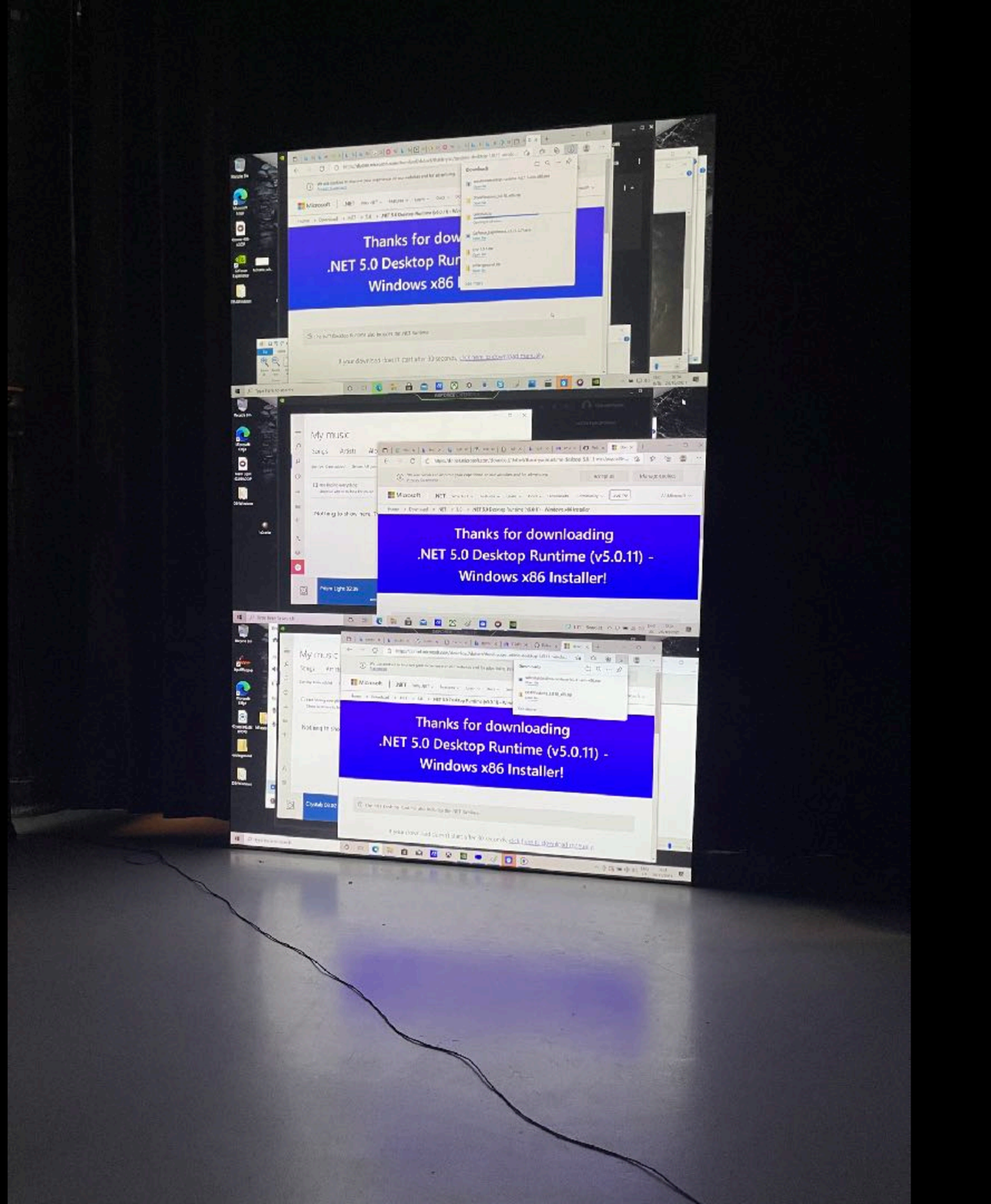
Player 3 - Subterranean

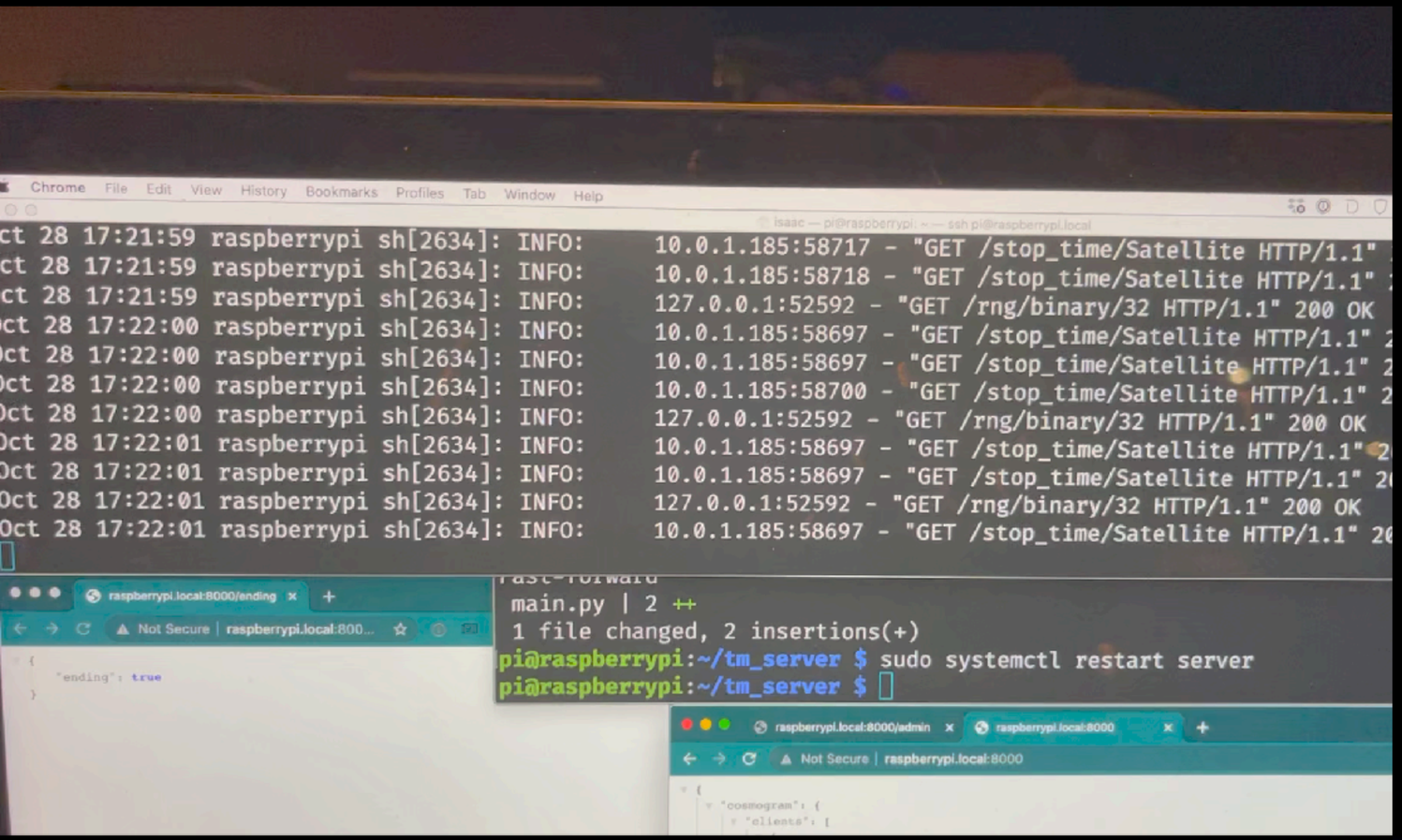
Player leaning: Enter | Arrive Mid | Arrive End

Vapour ()	Set to X	Set to Triangle
Water ()	Set to Triangle	Set to Circle
Ice ()	Set to X	Set to Square
Ozone ()	Set to X	Set to Square
Chlorophyll ()	Set to Triangle	Set to Circle
Crystal ()	Set to X	Set to Triangle
Satellite ()	Set to X	Set to Square
MIMO ()	Set to Triangle	Set to Circle
Cables ()	Set to Circle	Set to Square
Cosmicray ()	Set to Circle	Set to Square
Prism ()	Set to X	Set to Triangle
Bioluminescence ()	Set to X	Set to Circle
Lightning ()	Set to X	Set to Circle
Earthquake ()	Set to Triangle	Set to Square
Lava ()	Set to X	Set to Circle

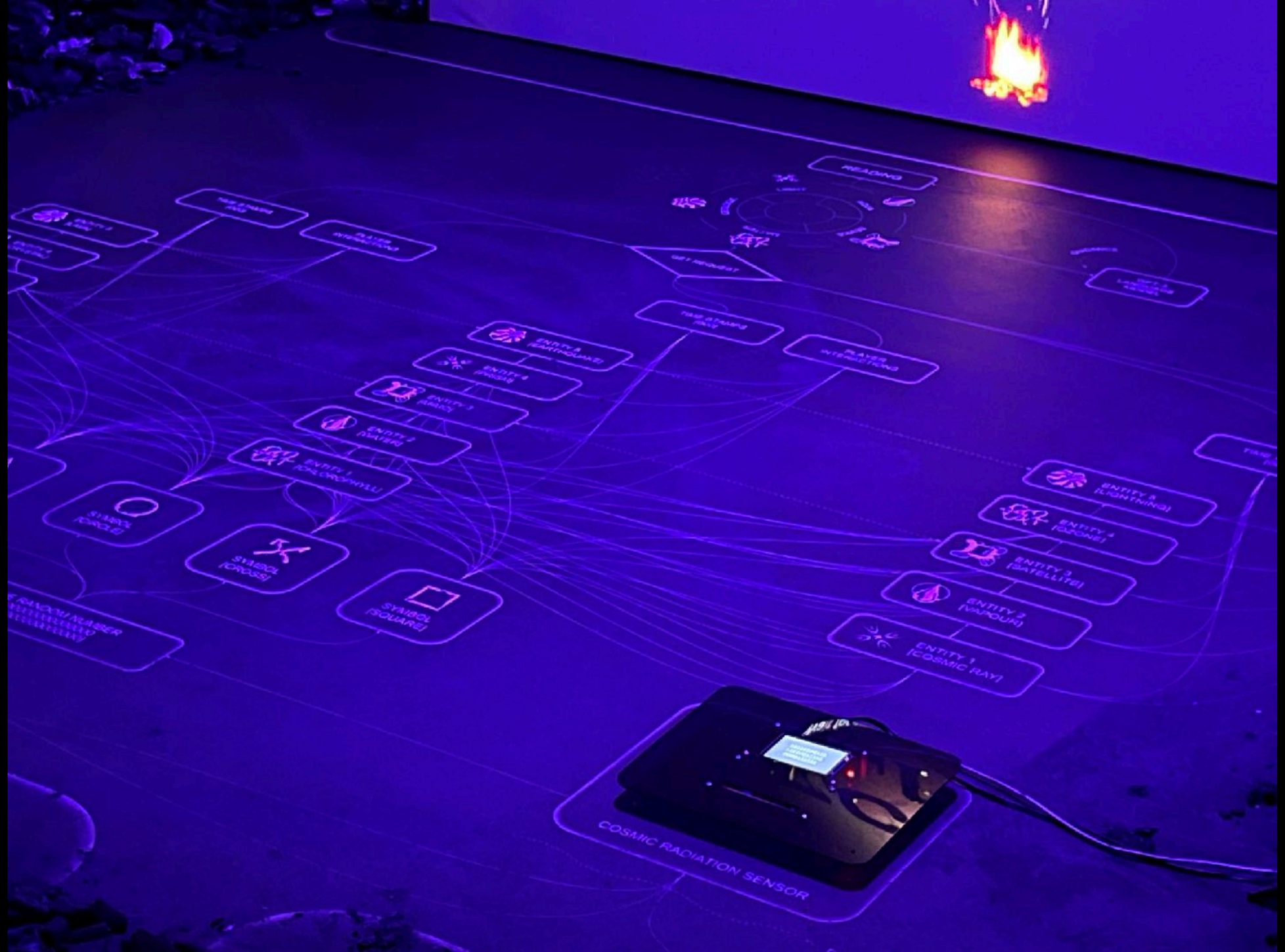
Testing

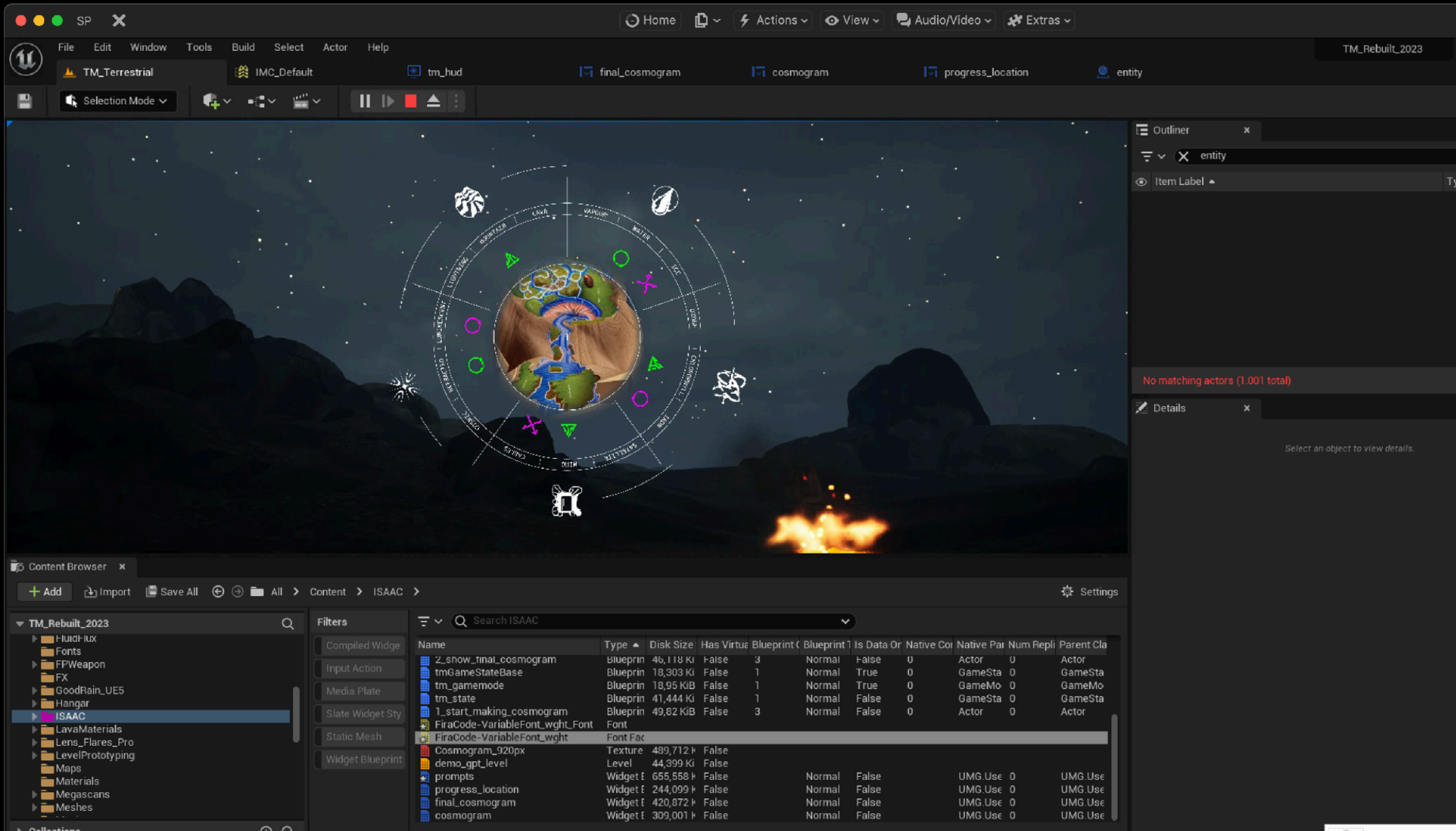


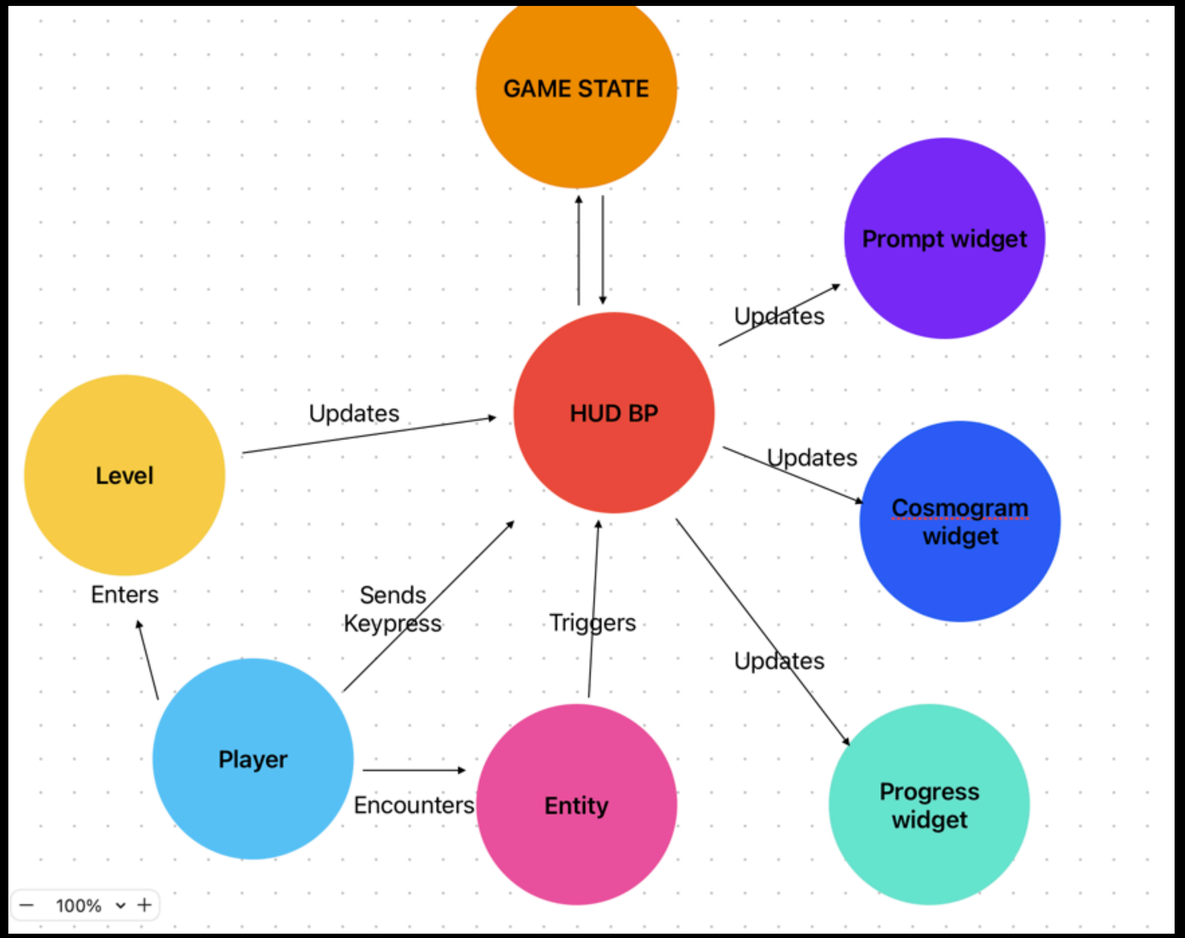

Thanks for dow
.NET 5.0 Desktop Run
Windows x86
Thanks for downloading
.NET 5.0 Desktop Runtime (v5.0.11) -
Windows x86 Installer!
Thanks for downloading
.NET 5.0 Desktop Runtime (v5.0.11) -
Windows x86 Installer!

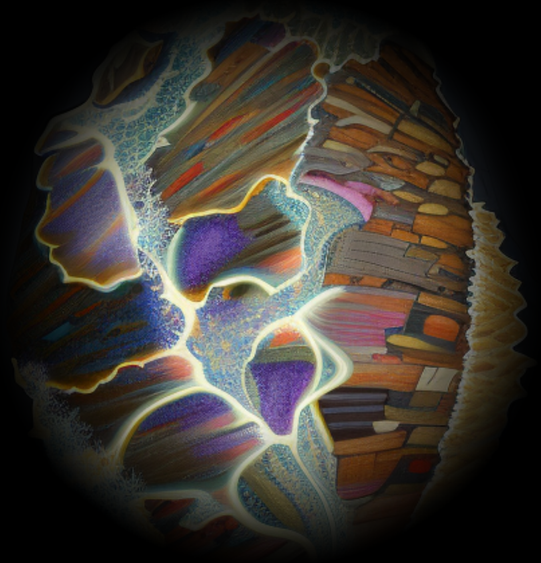

Chrome File Edit View History Bookmarks Profiles Tab Window Help
ct 28 17:21:59 raspberrypi sh[2634]: INFO: 10.0.1.185:58717 - "GET /stop_time/Satellite HTTP/1.1"
ct 28 17:21:59 raspberrypi sh[2634]: INFO: 10.0.1.185:58718 - "GET /stop_time/Satellite HTTP/1.1"
ct 28 17:21:59 raspberrypi sh[2634]: INFO: 127.0.0.1:52592 - "GET /rng/binary/32 HTTP/1.1" 200 OK
ct 28 17:22:00 raspberrypi sh[2634]: INFO: 10.0.1.185:58697 - "GET /stop_time/Satellite HTTP/1.1"
ct 28 17:22:00 raspberrypi sh[2634]: INFO: 10.0.1.185:58697 - "GET /stop_time/Satellite HTTP/1.1"
ct 28 17:22:00 raspberrypi sh[2634]: INFO: 10.0.1.185:58700 - "GET /stop_time/Satellite HTTP/1.1"
ct 28 17:22:00 raspberrypi sh[2634]: INFO: 127.0.0.1:52592 - "GET /rng/binary/32 HTTP/1.1" 200 OK
ct 28 17:22:01 raspberrypi sh[2634]: INFO: 10.0.1.185:58697 - "GET /stop_time/Satellite HTTP/1.1"
ct 28 17:22:01 raspberrypi sh[2634]: INFO: 10.0.1.185:58697 - "GET /stop_time/Satellite HTTP/1.1"
ct 28 17:22:01 raspberrypi sh[2634]: INFO: 127.0.0.1:52592 - "GET /rng/binary/32 HTTP/1.1" 200 OK
ct 28 17:22:01 raspberrypi sh[2634]: INFO: 10.0.1.185:58697 - "GET /stop_time/Satellite HTTP/1.1"
raspberrypi.local:8000/ending
Not Secure | raspberrypi.local:800...
"ending": true
main.py | 2 ++
1 file changed, 2 insertions(+)
pi@raspberrypi:~/tm_server $ sudo systemctl restart server
pi@raspberrypi:~/tm_server $
raspberrypi.local:8000/admin
raspberrypi.local:8000
Not Secure | raspberrypi.local:8000
"cosmogram":
"clients":

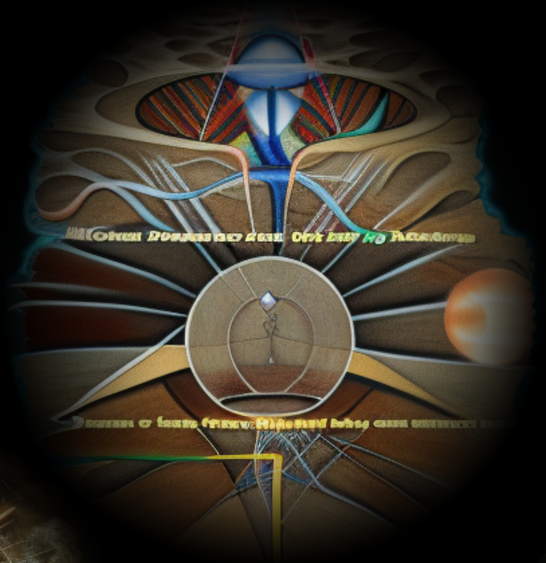
LIGHT
AQUA
ENERGY
MATTER
BIOLOGIC

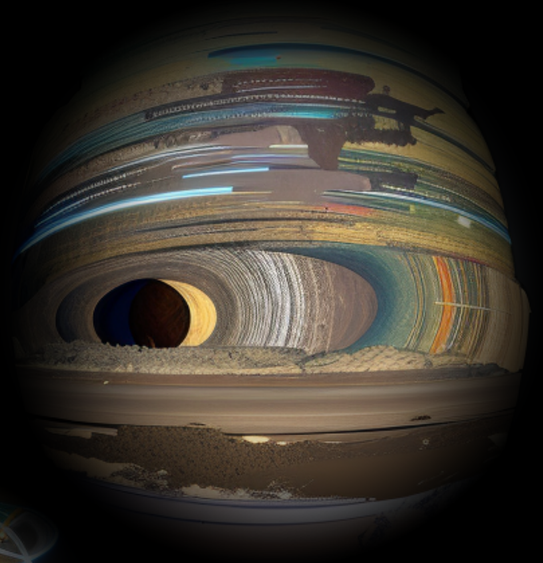

READING
PLAYER INTERACTIONS
ENTITY 5 (EARTHQUAKE)
ENTITY 4 (FRIGAR)
ENTITY 3 (MAIC)
ENTITY 2 (WATER)
ENTITY 1 (CHLOROPHYLL)
SYMBOL (CIRCLE)
SYMBOL (CROSS)
SYMBOL (SQUARE)
ENTITY 5 (LIGHTNING)
ENTITY 4 (OZONE)
ENTITY 3 (SATELLITE)
ENTITY 2 (VAPOUR)
ENTITY 1 (COSMIC RAY)
COSMIC RADIATION SENSOR

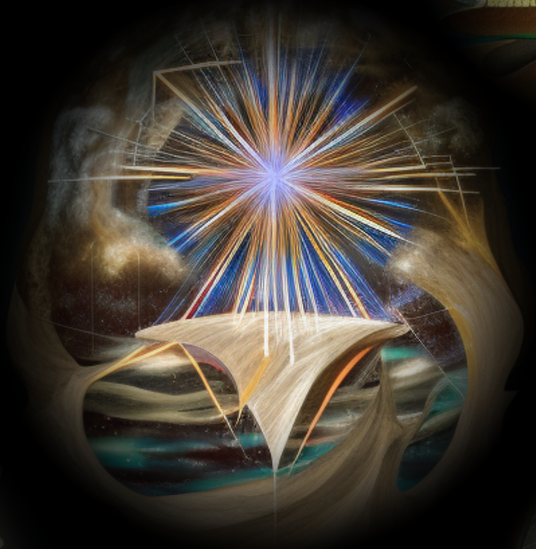

SP
Home
Actions
View
Audio/Video
Extras
File
Edit
Window
Tools
Build
Select
Actor
Help
TM_Rebuilt_2023
TM_Terrestrial
IMC_Default
tm_hud
final_cosmogram
cosmogram
progress_location
entity
Selection Mode
Outliner
entity
Item Label
Type
No matching actors (1.001 total)
Details
Select an object to view details.
Content Browser
Add
Import
Save All
All
Content
ISAAC
Settings
TM_Rebuilt_2023
Fonts
FPWeapon
FX
GoodRain_UE5
Hangar
ISAAC
LavaMaterials
Lens_Flares_Pro
LevelPrototyping
Maps
Materials
Megascans
Meshes
Filters
Compiled Widge
Input Action
Media Plate
Slate Widget Sty
Static Mesh
Widget Blueprint
Search ISAAC
Name
Type
Disk Size
Has Virtua
Blueprint (
Blueprint T
Is Data Or
Native Co
Native Par
Num Repli
Parent Cla
2_show_final_cosmogram
tmGameStateBase
tm_gamemode
tm_state
1_start_making_cosmogram
FiraCode-VariableFont_wght_Font
FiraCode-VariableFont_wght
Cosmogram_920px
demo_gpt_level
prompts
progress_location
final_cosmogram
cosmogram

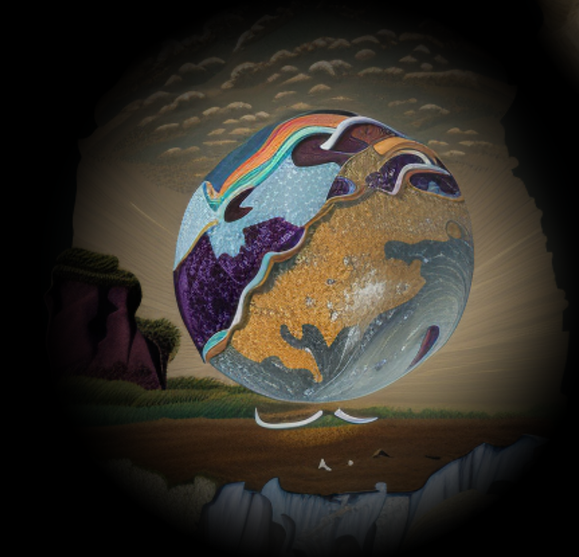

GAME STATE
Prompt widget
Updates
HUD BP
Updates
Level
Updates
Cosmogram widget
Enters
Sends Keypress
Triggers
Updates
Player
Encounters
Entity
Progress widget
100%

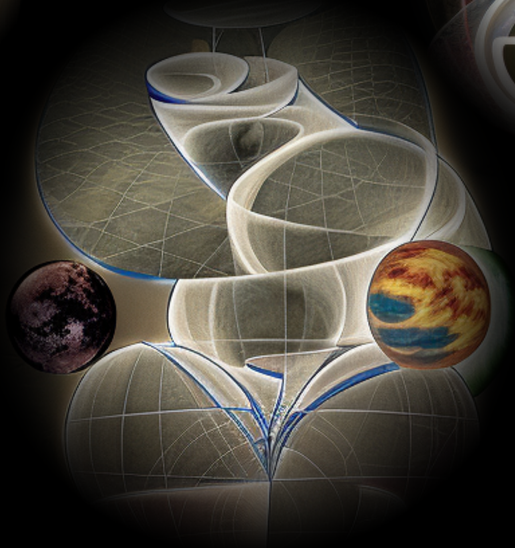












[ISEA2023] Artist Talk: Vincent Thornhill, Guillemette Legrand & Isaac Clarke — Spectral Plain: a case study for exploring the world-building potential of co-creative systems that combine text generation models with game mechanics

Artist Statement

Theme *Immersion(s)* Subtheme *Symbiotic Imaginaries*

A presentation of the game installation Spectral Plain; an interactive artwork that intersects algorithmic, sensing, and gaming technologies to explore new forms of generative and co-creative world-building processes that seek to simulate multiscalar and pluralistic imaginations of the planet.

- **Vincent Thornhill** is a designer; artistic researcher at KU Leuven / LUCA School of Arts, Belgium; and educator at the Design Academy Eindhoven, NL. Their practice questions humanistic readings of digital image infrastructure, with a focus on image processing algorithms.
- **Guillemette Legrand** is an artist and designer affiliated with the research group Reflective Interaction of the EnsadLab (École des Arts Décoratifs, Paris, France). Their practice engages with machine-fictioning and worlding techniques to simulate other possible imaginations of computational logic and the visual culture that emerge from it.
- *Isaac Clarke* is a fictional character in the survival horror media franchise Dead Space, owned and published by Electronic Arts *https://en.wikipedia.org/wiki/Isaac_Clarke*