dongguk UNIVERSITY

Multimedia Music with Dance

Dance the Music

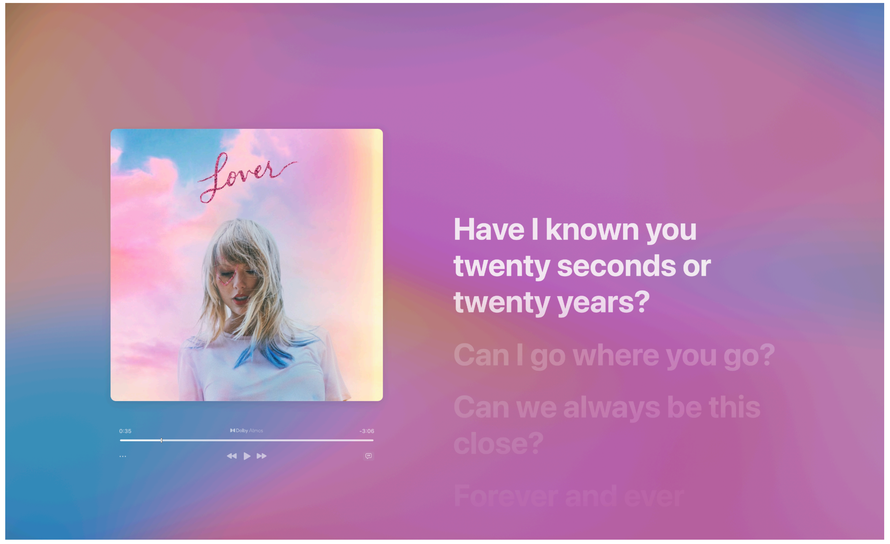
Gwangyu Lee

Gypsy Jazz

Tango


CROSLEY


A
N.R.
IN OUT
TDK
High Bias 70μs EQ
SA
90


Lover
Have I known you twenty seconds or twenty years?
Can I go where you go?
Can we always be this close?
Forever and ever

What if the dancers could “Dance the music” rather than “Dance to the music”?

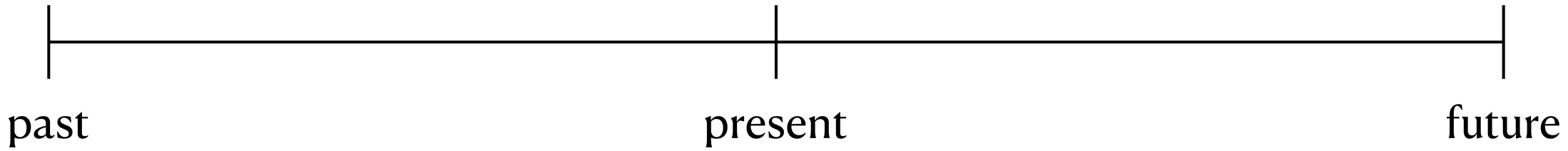
Interactive Dance

Tchaikovsky

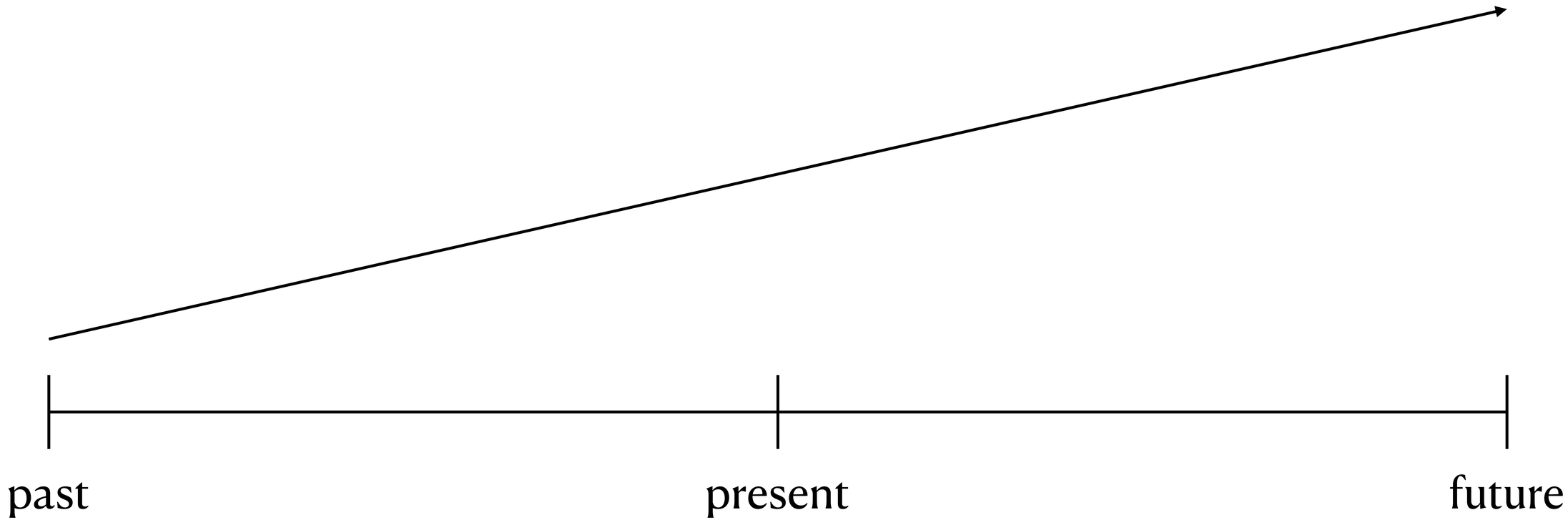
“Audio content and visual content in multimedia cannot be broken down into two independent elements”

Why Interactive Dance?

Linear-time

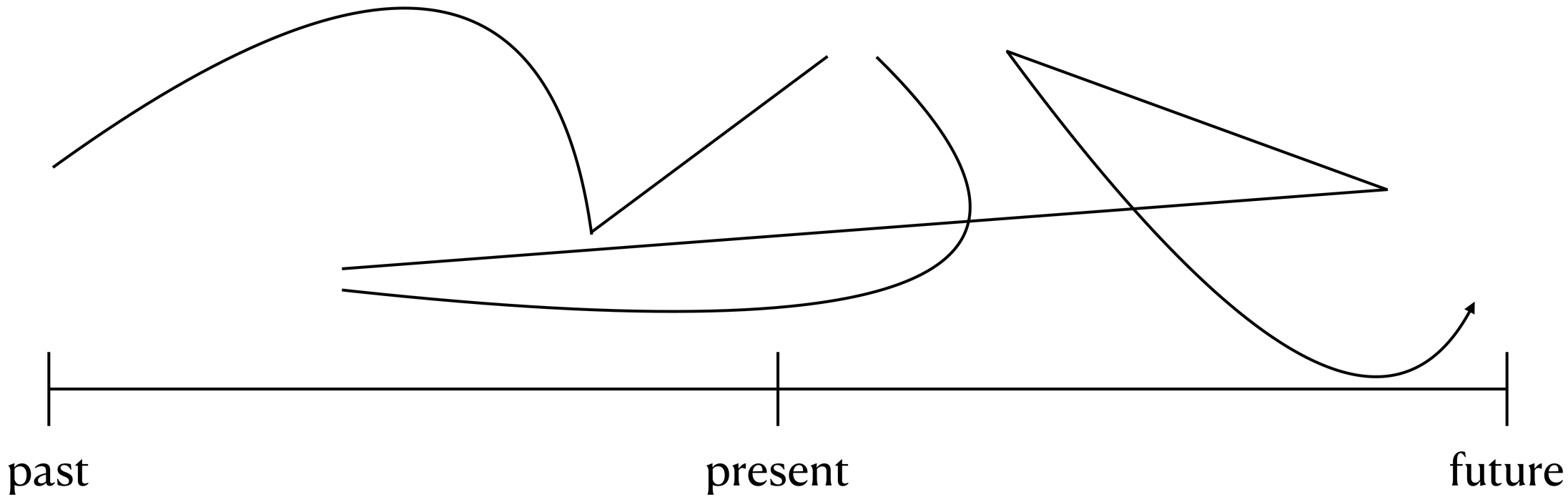


Linear-time



Real-time

Real-time



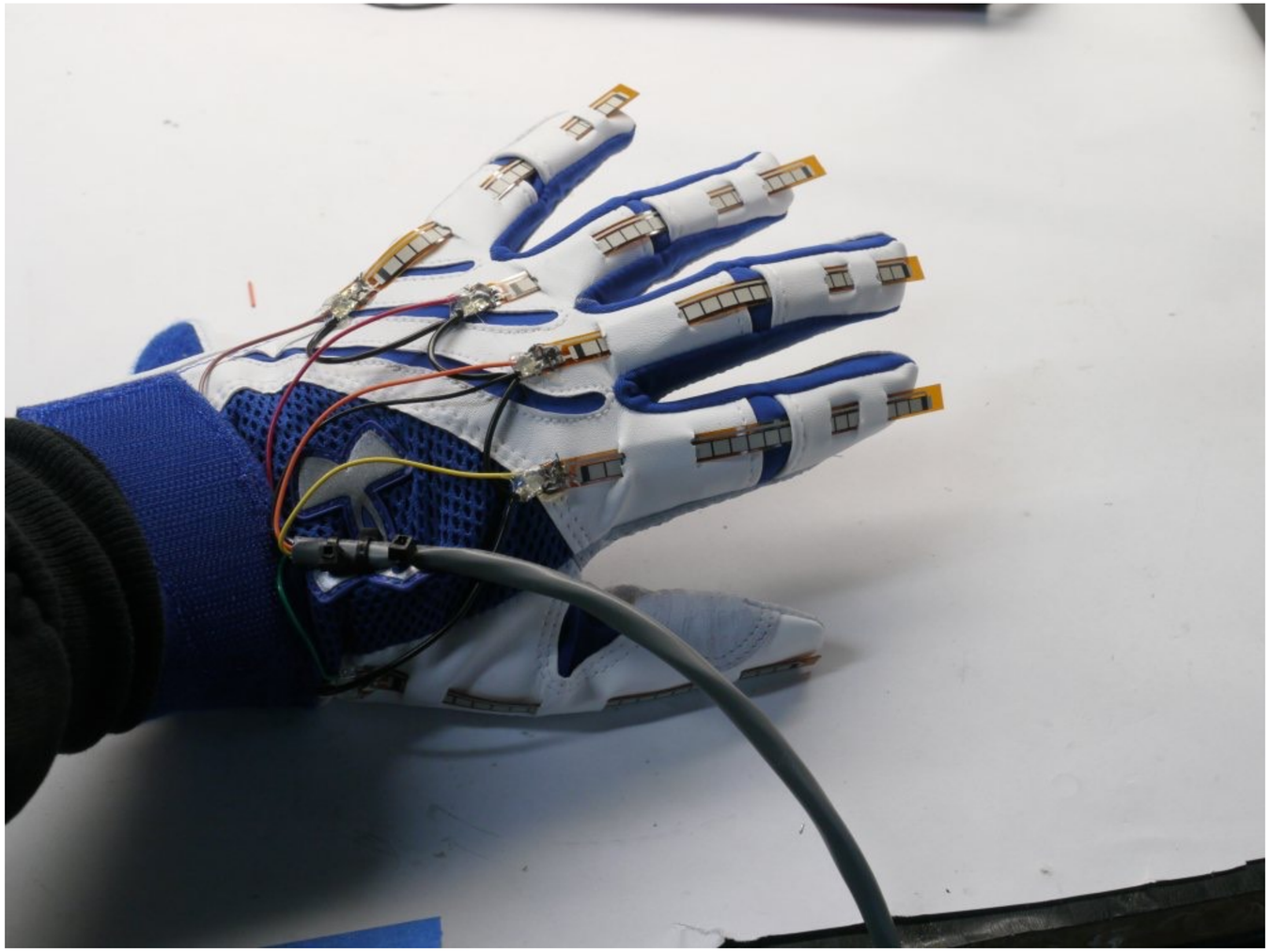
Motion-Tracking Technologies

Motion-Tracking Technologies

- Inside-In
- Inside-Out
- Outside-In
- Camera-based motion-tracking systems(Computer Vision)

Inside-In

Inside-In



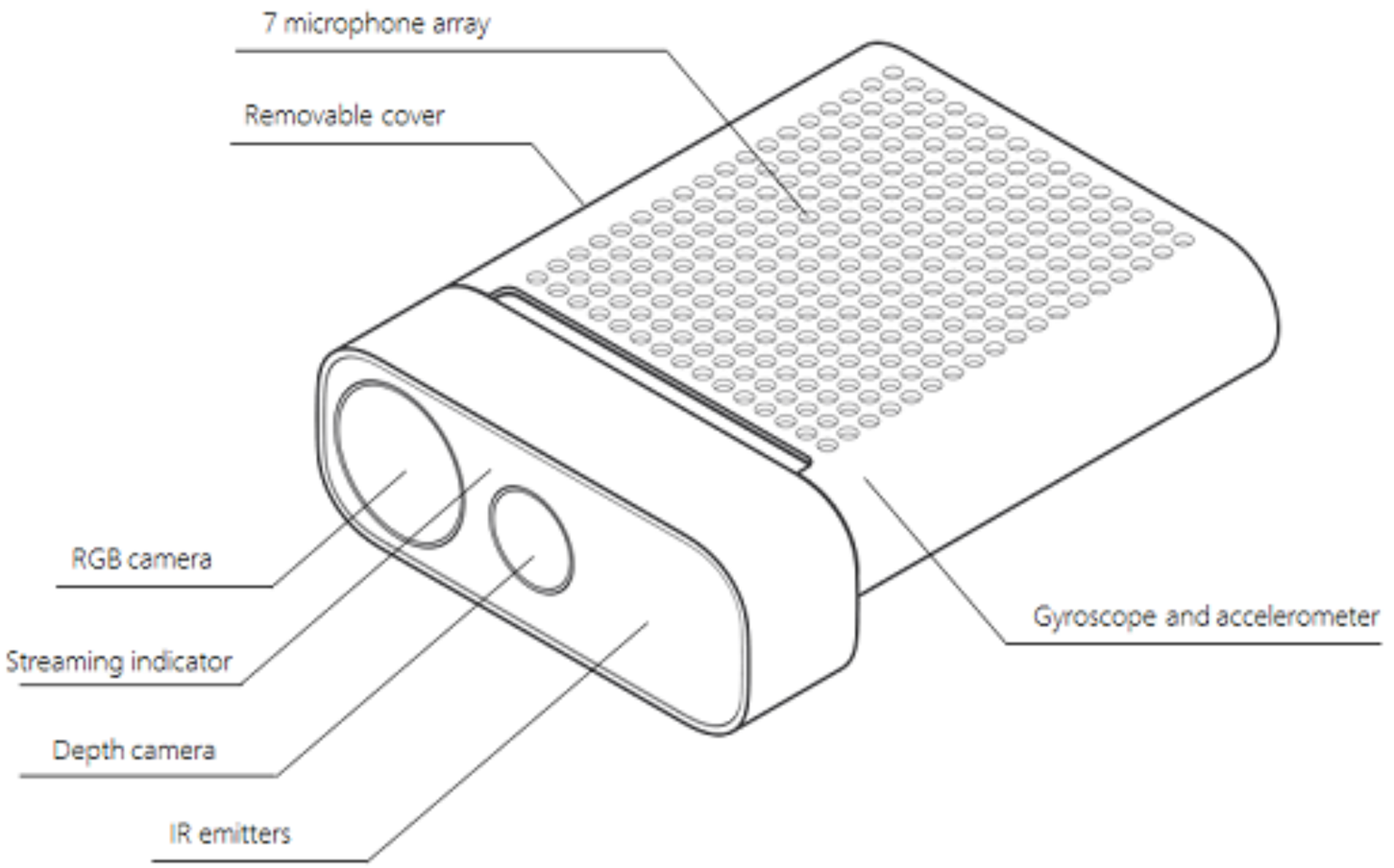
Inside-Out

https://youtu.be/S-T8kcSRLLo?feature=shared&t=419

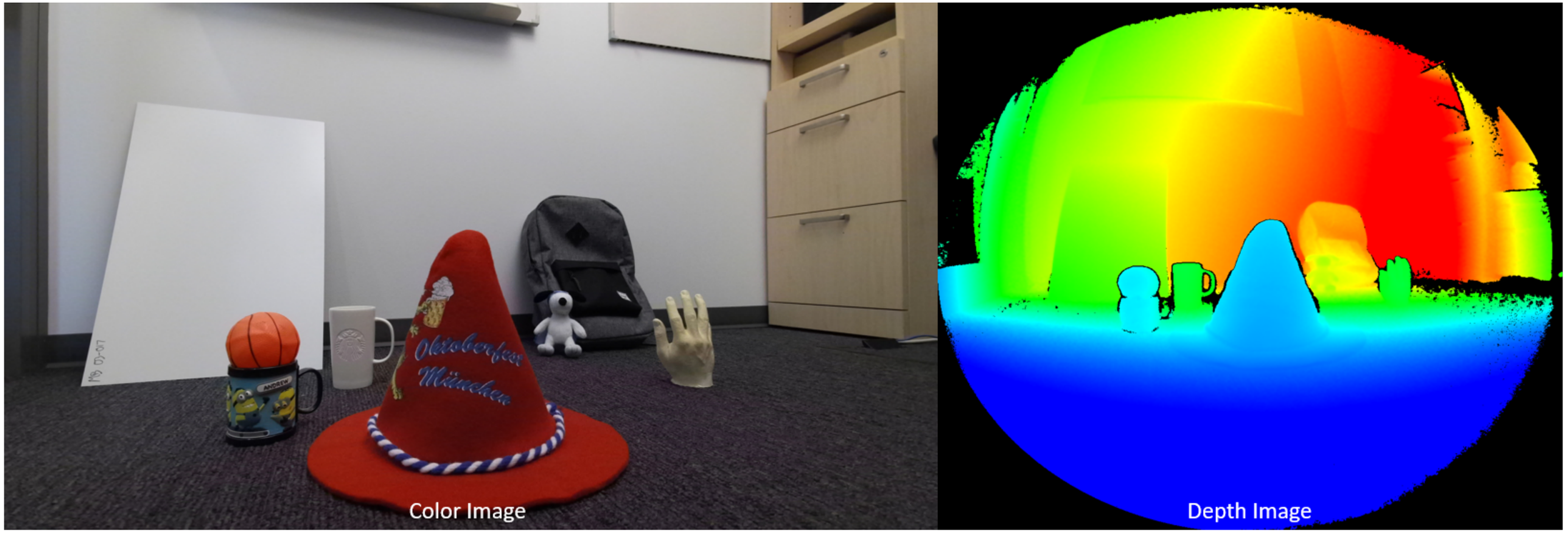
Outside-In

Outside-In

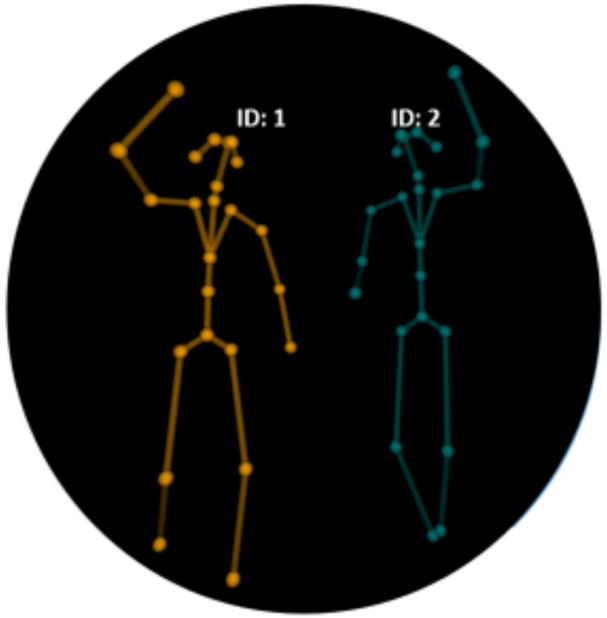
Azure Kinect DK



Azure Kinect DK



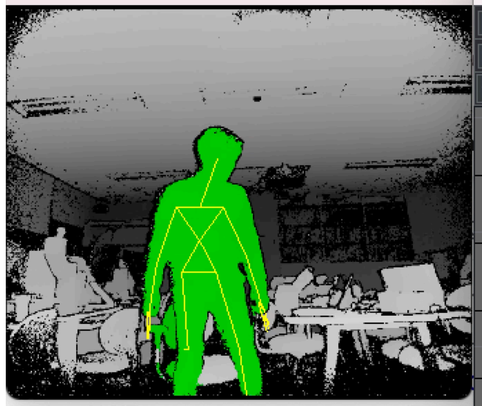
Azure Kinect DK



TouchDesigner File Edit Dialogs View Window Help

Thu Mar 25 7:43 AM

Kinect for Windows 2 (29/29 fps)



Sep 25, 2017 — The face
Right below the "**calibrate**

V1.X Documentation - V1
Documentation: User inte
Skeleton tracking - Docun
4.4 **OSC** (Open Sound Co
More results from forum.n

community.troikatronix.co

Motion Capture/Tr

Oct 28, 2017 — Motion C
Mate and I have manage
outgoing port number in N

community.troikatronix.co

[ANSWERED] Kin it ...

In terms of a comparison
spatial trigger point **calibr**

TouchDesigner 2021.11180: /Users/igwangyu/Desktop/NewProject.1.toe

[WIKI] [FORUM] [TUTORIALS] O|I 60 FPS: 18 Realtime 7:30:19 1 Operators deleted.

Pane Layout New Layout

/ project1

-0.2764 Head1
1.275 Head2
1.823 Head3
-0.4303 Neck1
1.089 Neck2
1.705 Neck3
-0.491 Torso1
0.9082 Torso2
1.668 Torso3
-0.314 R_Shoulder1
1.051 R_Shoulder2
1.716 R_Shoulder3
-0.546 L_Shoulder1
1.128 L_Shoulder2
1.696 L_Shoulder3
-0.278 R_Elbow1
0.6795 R_Elbow2
1.687 R_Elbow3
-0.7512 L_Elbow1
0.8887 L_Elbow2
1.567 L_Elbow3
-0.252 R_Hand1
0.4902 R_Hand2
1.483 R_Hand3
-0.8469 L_Hand1
0.6712 L_Hand2
1.449 L_Hand3
-0.4686 R_Hip1
0.7018 R_Hip2
1.638 R_Hip3
-0.6351 L_Hip1
0.7589 L_Hip2
1.626 L_Hip3
-0.4082 R_Knee1
0.3794 R_Knee2
1.37 R_Knee3
-0.742 L_Knee1
0.3727 L_Knee2
1.396 L_Knee3
-0.8703 R_Foot1
0.4983 R_Foot2
1.497 R_Foot3
-0.8671 L_Foot1
0.2559 L_Foot2
1.7 L_Foot3
-0.2526 R_Palm1
0.4901 R_Palm2
1.484 R_Palm3
-0.8467 L_Palm1
0.6703 L_Palm2
1.449 L_Palm3

oscin1 null1 sphere1 transform1

Transform transform1

Transform Post

Group
Transform Order Scale Rotate Translate
Rotate Order Rx Ry Rz
Translate 0 0 0
Rotate 0 0 0
Scale 1 1 1
Pivot 0 0 0
Uniform Scale 1
Normals Maintain Length On
Look At
Up Vector 0 1 0
Forward Direction -Z

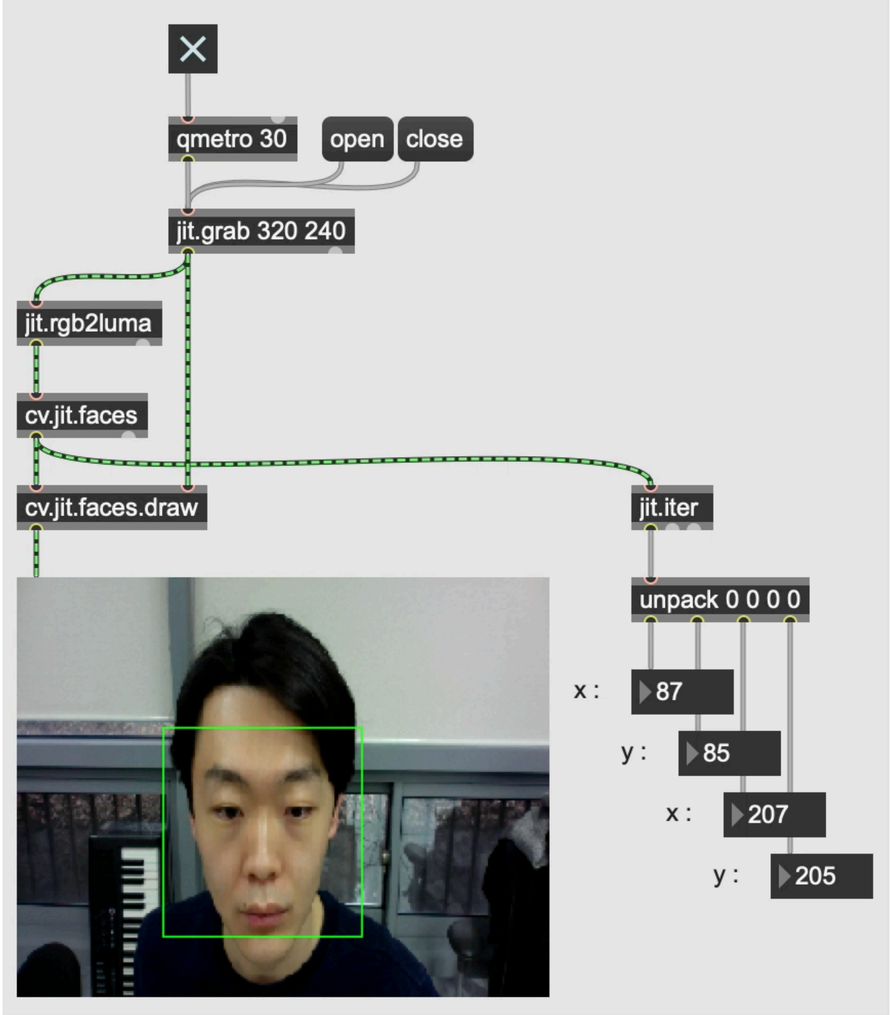
1 51 101 151 201 251 301 351 401 451 501 551 600

Start: 1 End: 600
RStart: 1 REnd: 600
FPS: 60.0 Tempo: 120.0
ResetF: 1 T Sig: 4 4

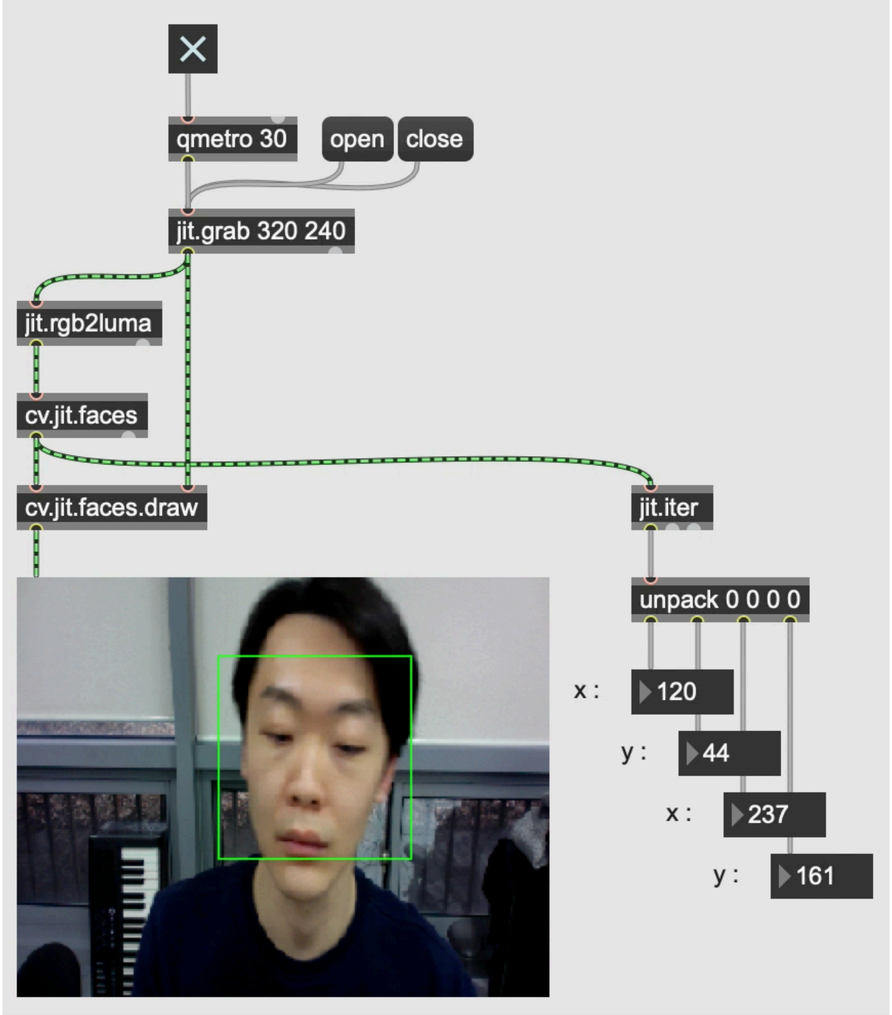
TimeCode Beats 00:00:08.55 536 Range Limit Loop Once

Time Path: /

Computer Vision

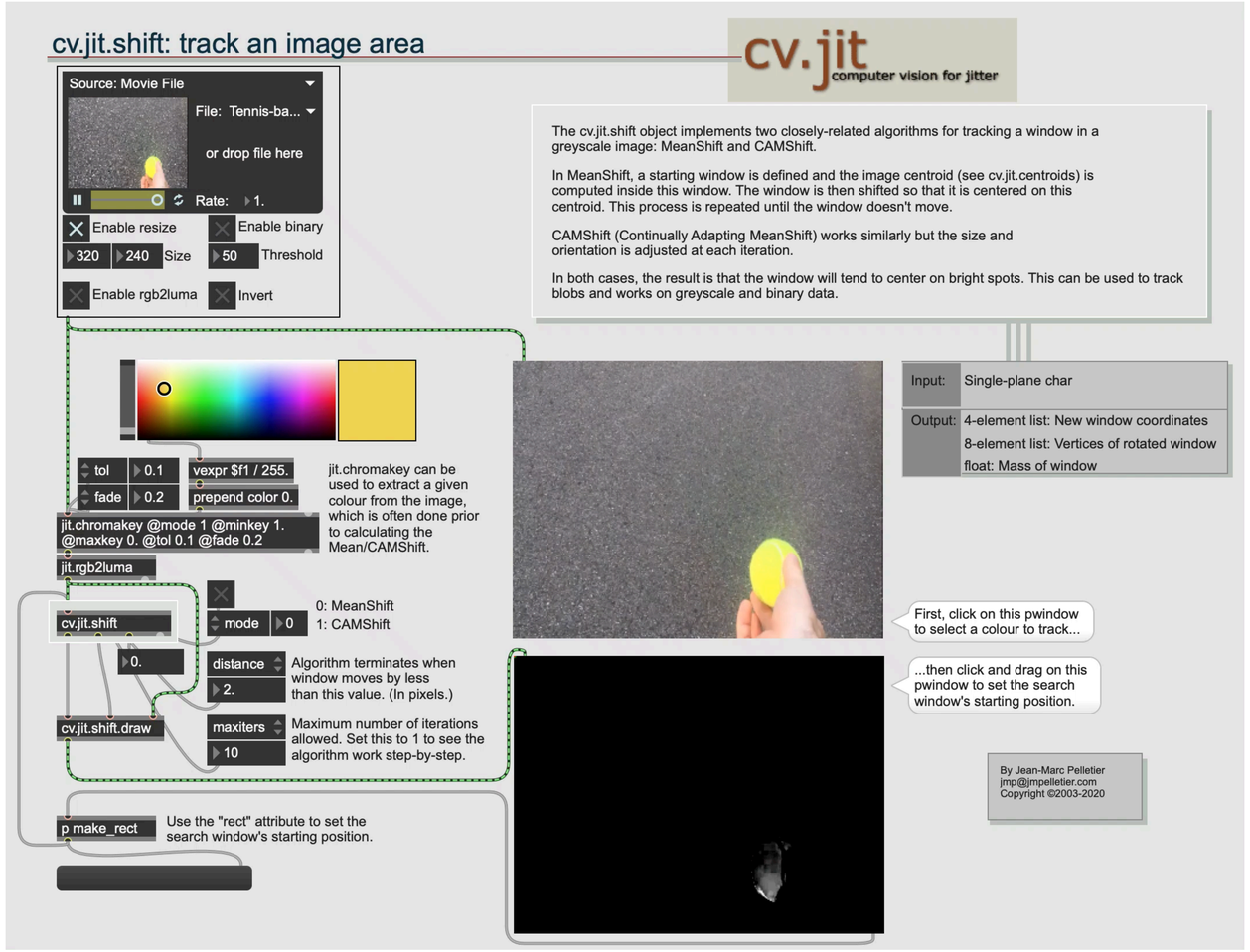


Computer Vision



Link

Computer Vision



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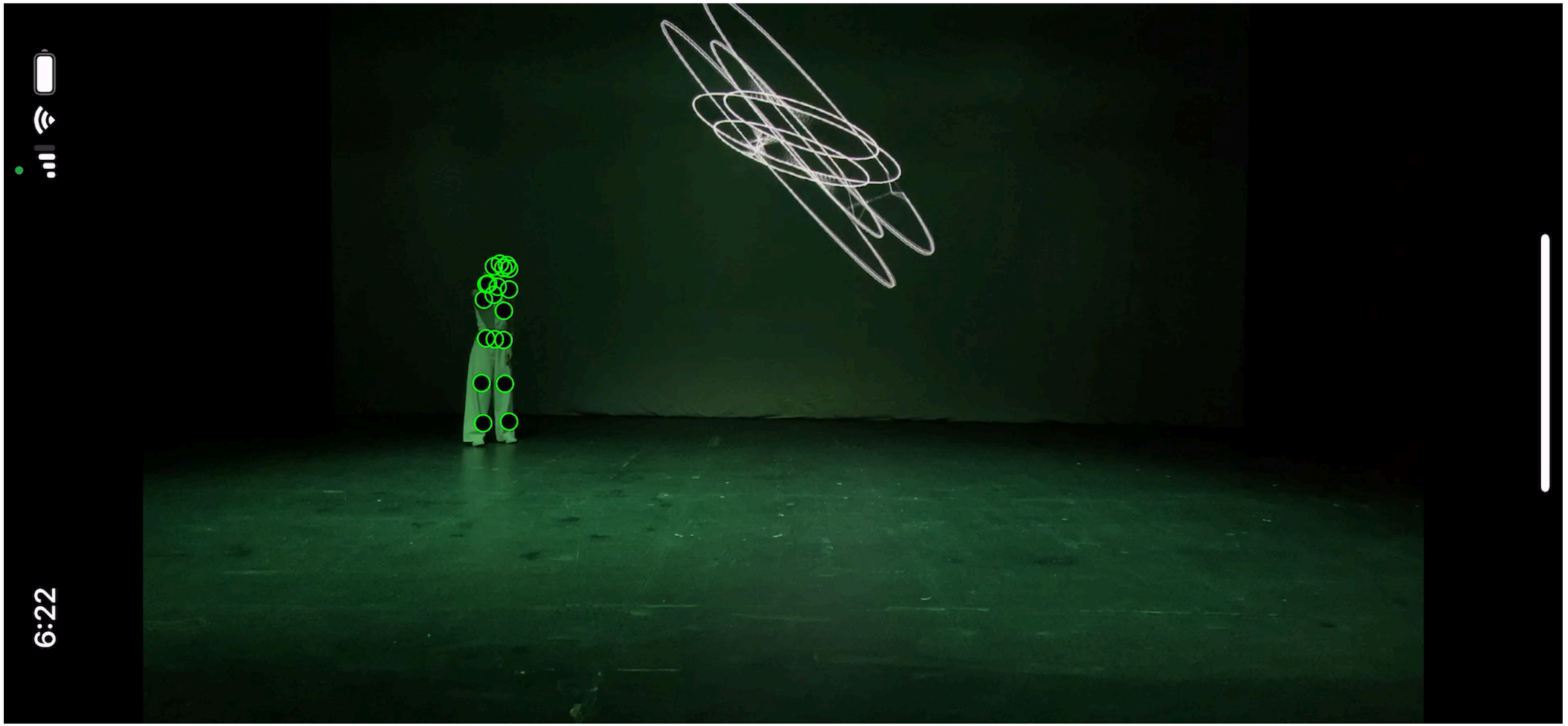
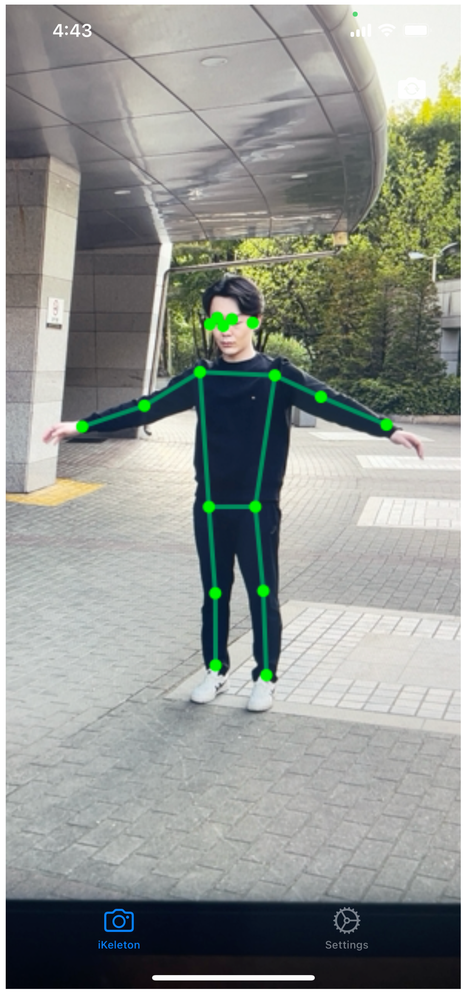
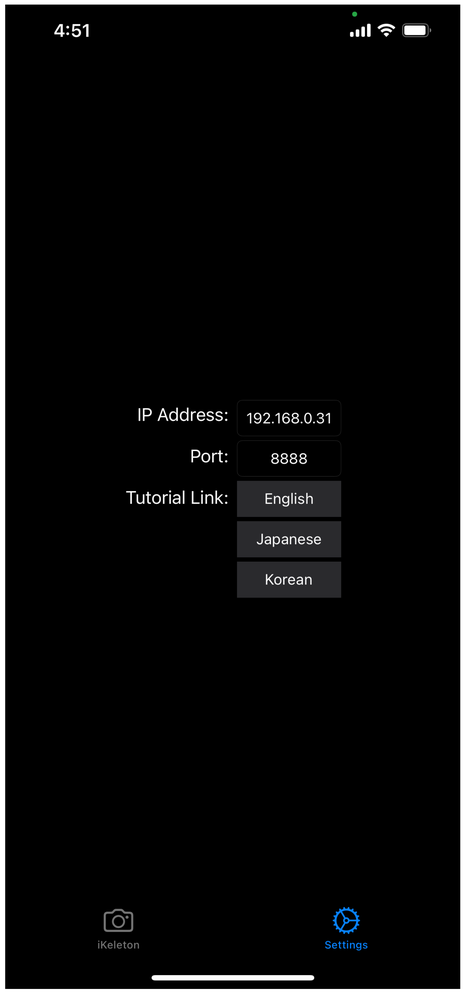
Computer Vision & Machine Learning



Link

Computer Vision & Machine Learning





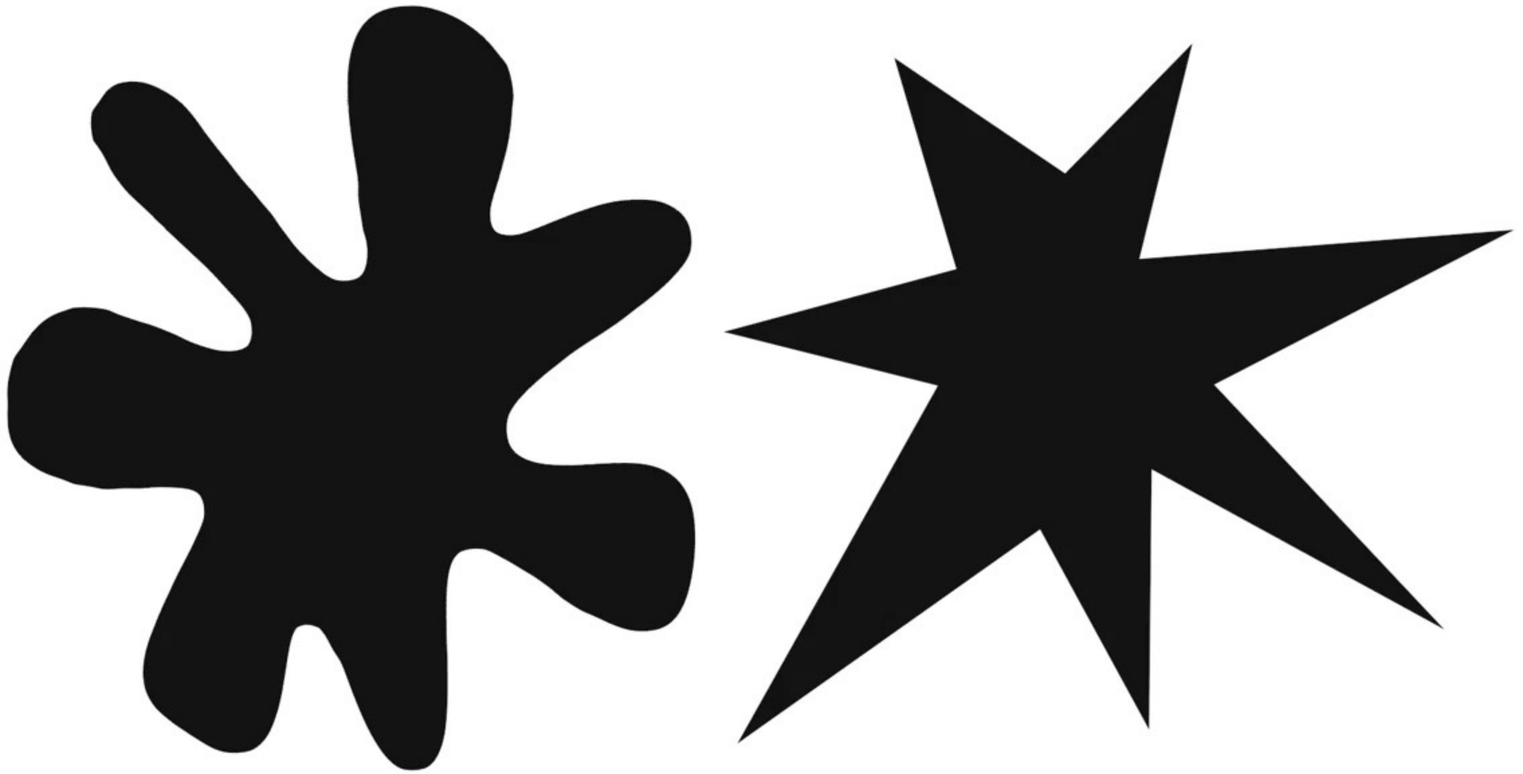
Link

Mapping Motion To Music

Kick Drum vs Fade Out

Link

Kiki & Bouba



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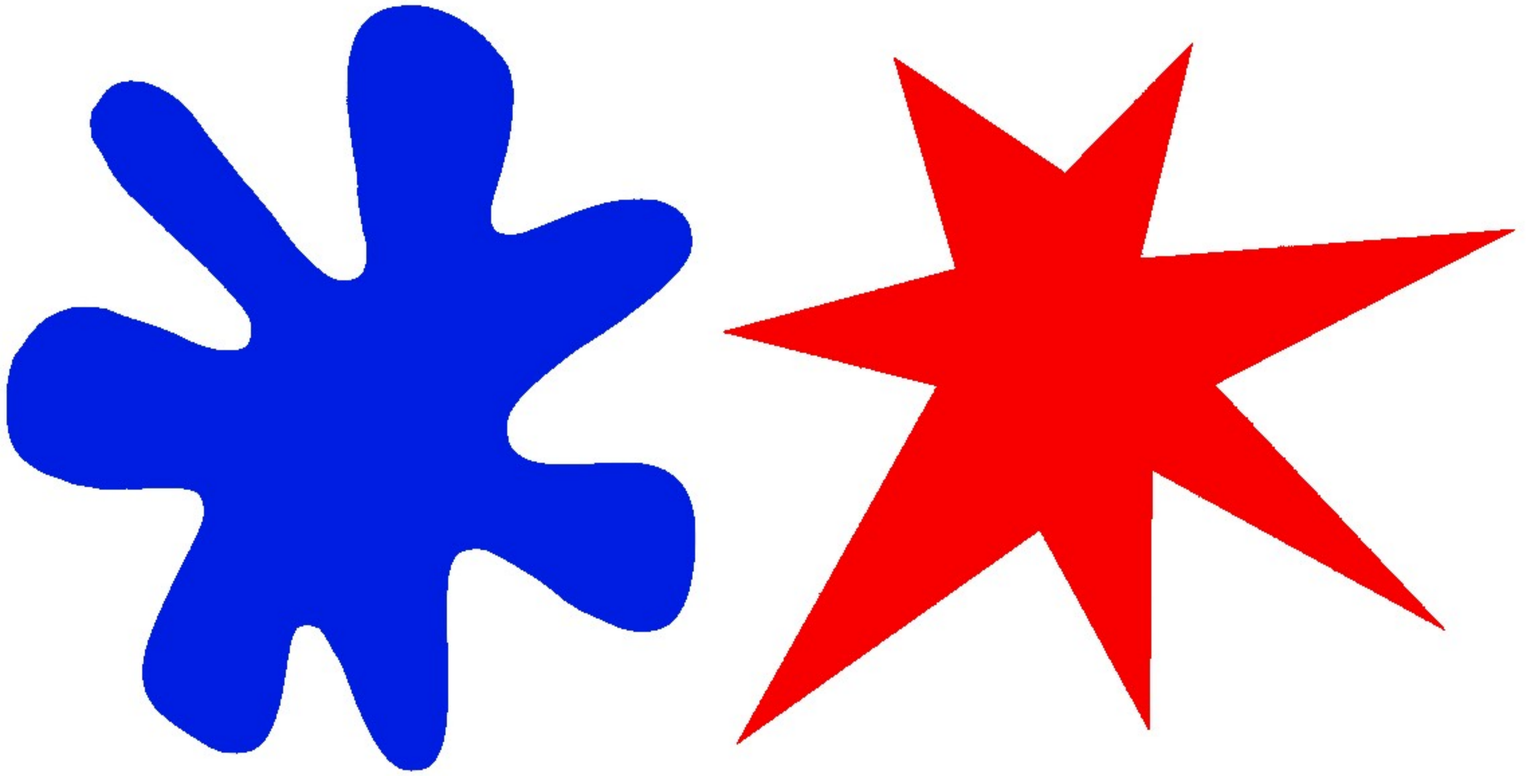
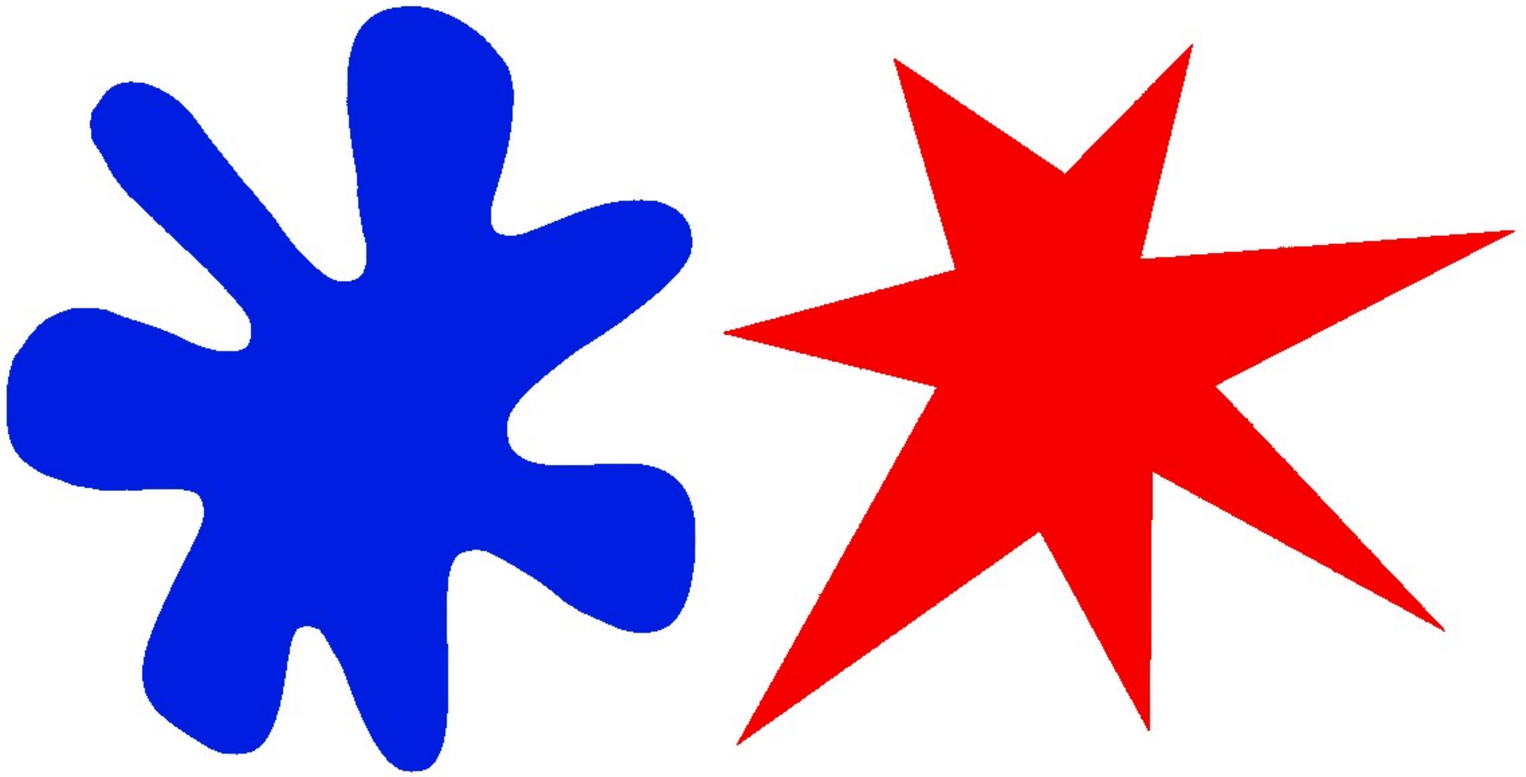


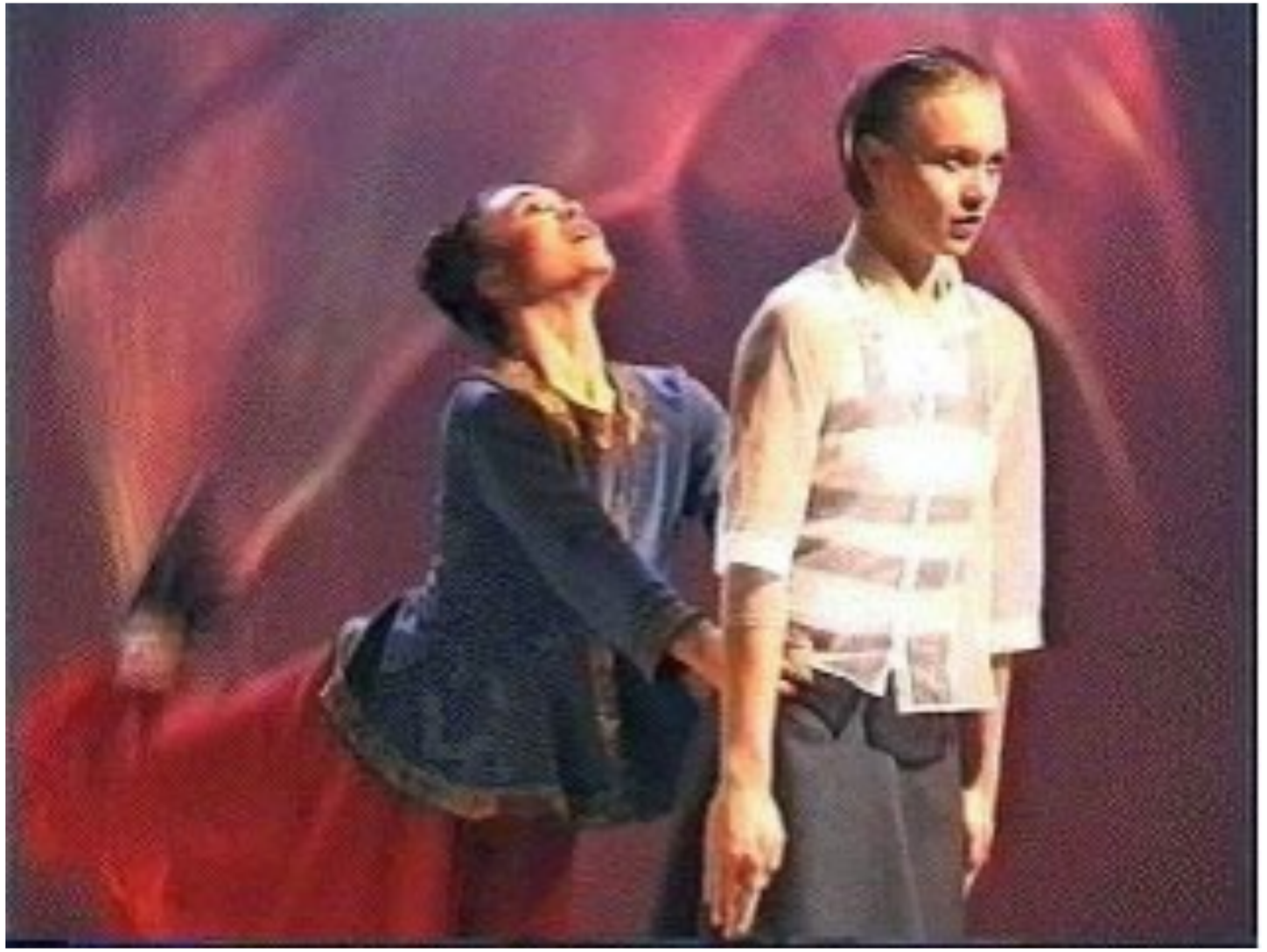
Link

Bouba & Kiki



Link

Sisters



http://waynesiegel.dk/wp-content/uploads/2013/08/Sisters.pdf

Pandora Project

http://waynesiegel.dk/?page_id=2703

Pandora Project

- Workshop
- Experiments
- Sketches

Liquid

Who

The Box

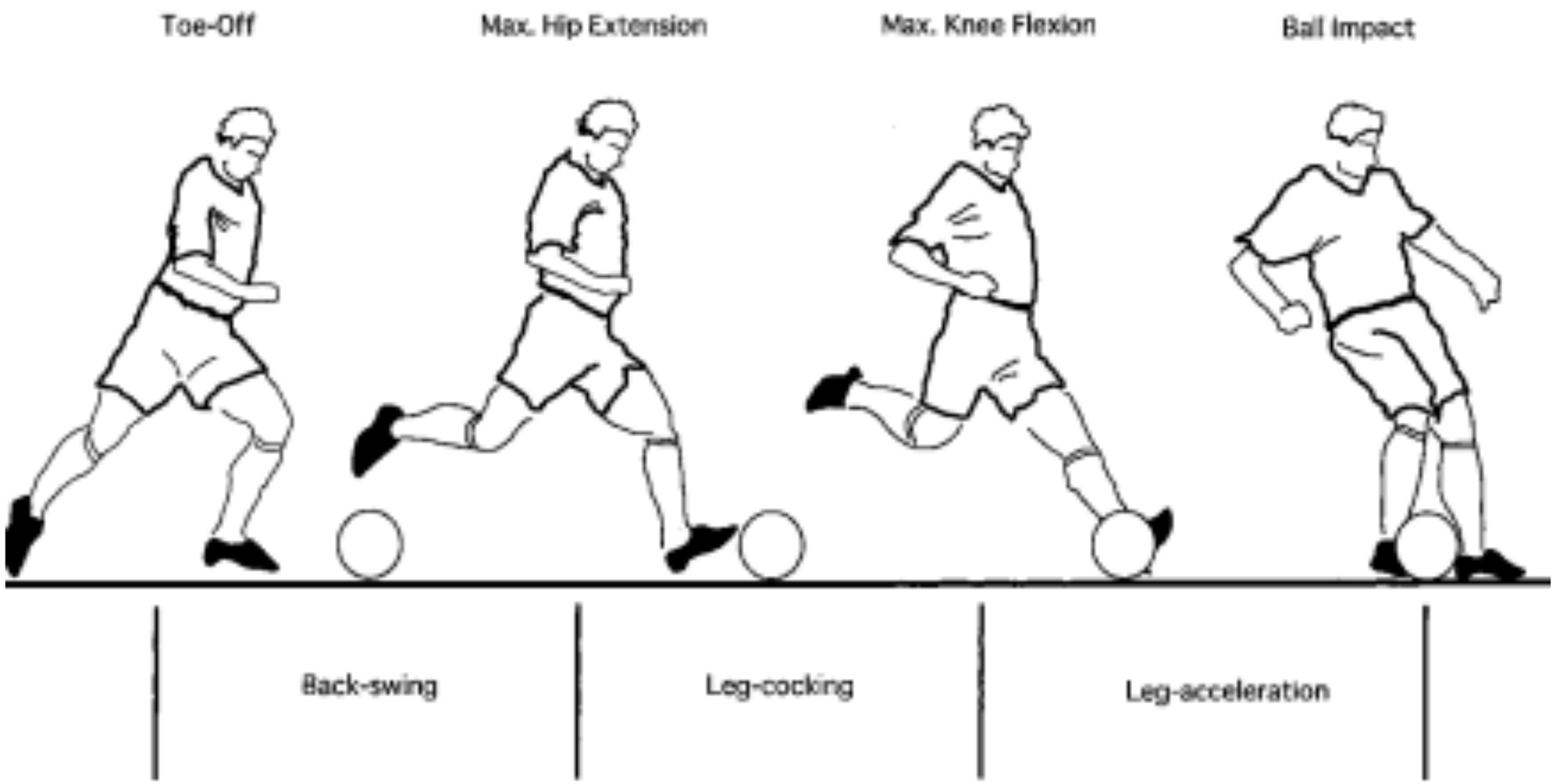
Fire

Circles

https://www.gwangyulee.com/2022/01/circlesfor-dance-piano-real-time-sound.html

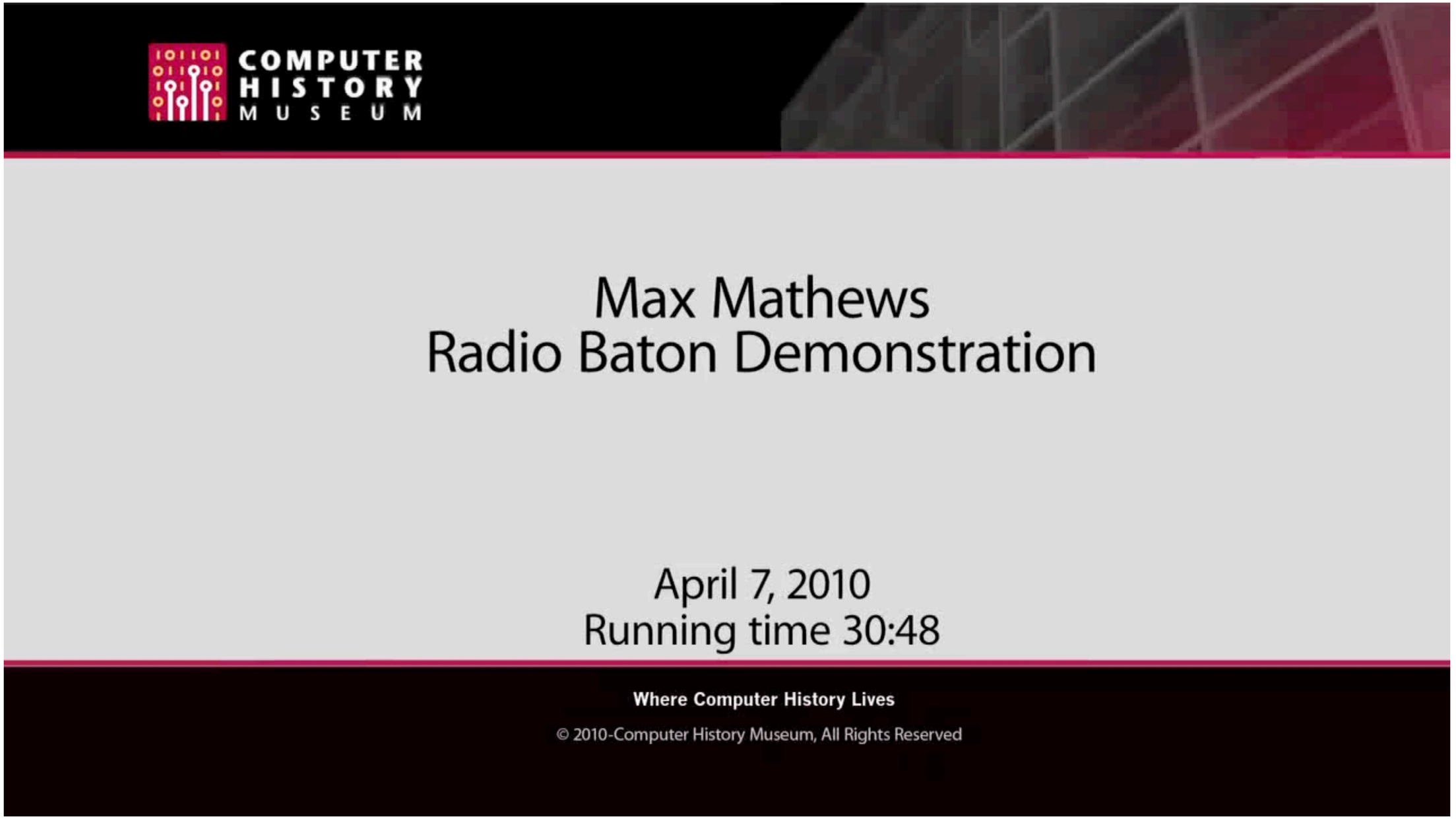
Gesture Interaction

Gesture



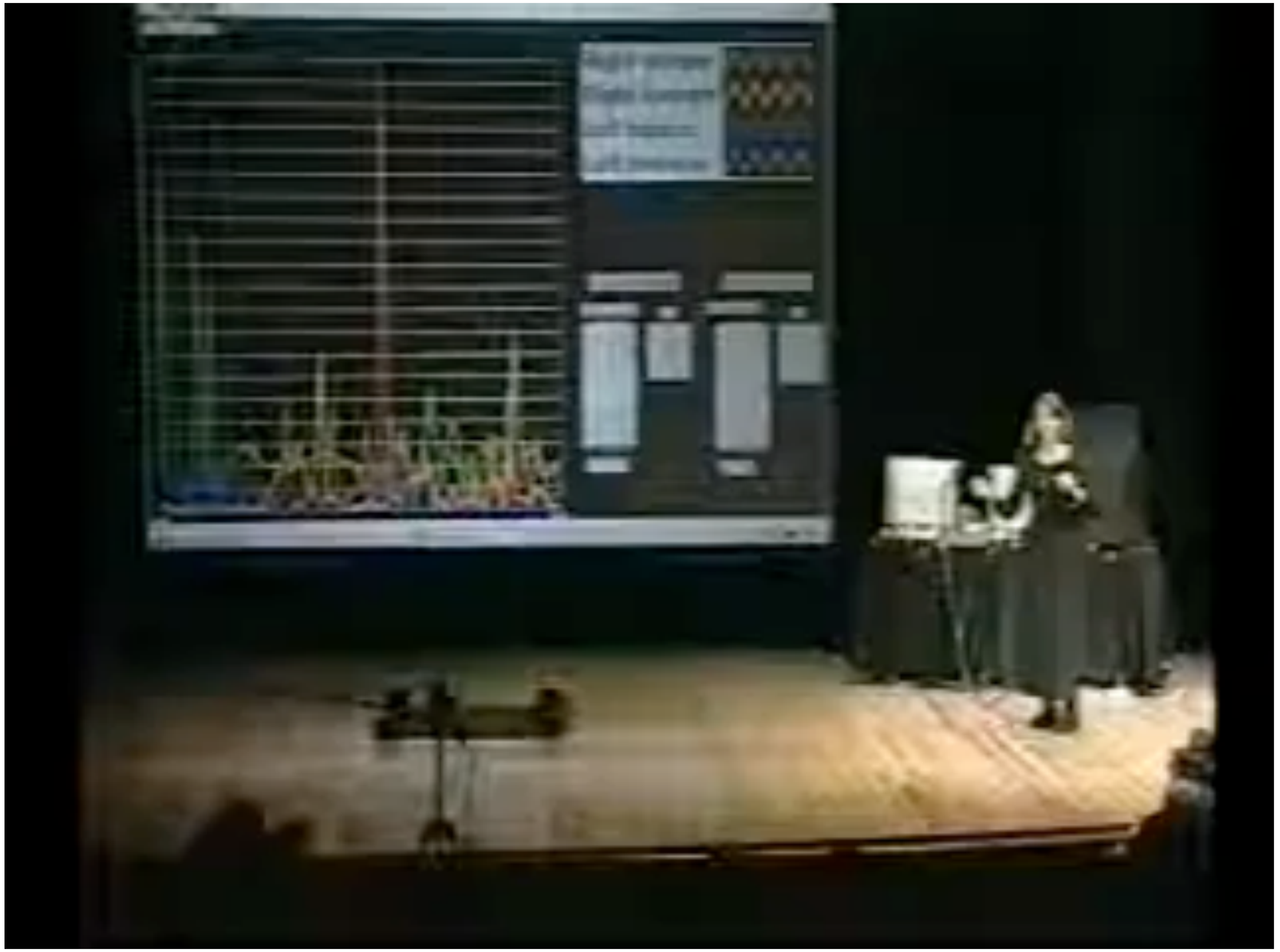
Link

Radio Baton



https://youtu.be/3ZOzUVD4oLg?feature=shared&t=344

Conductor Jacket



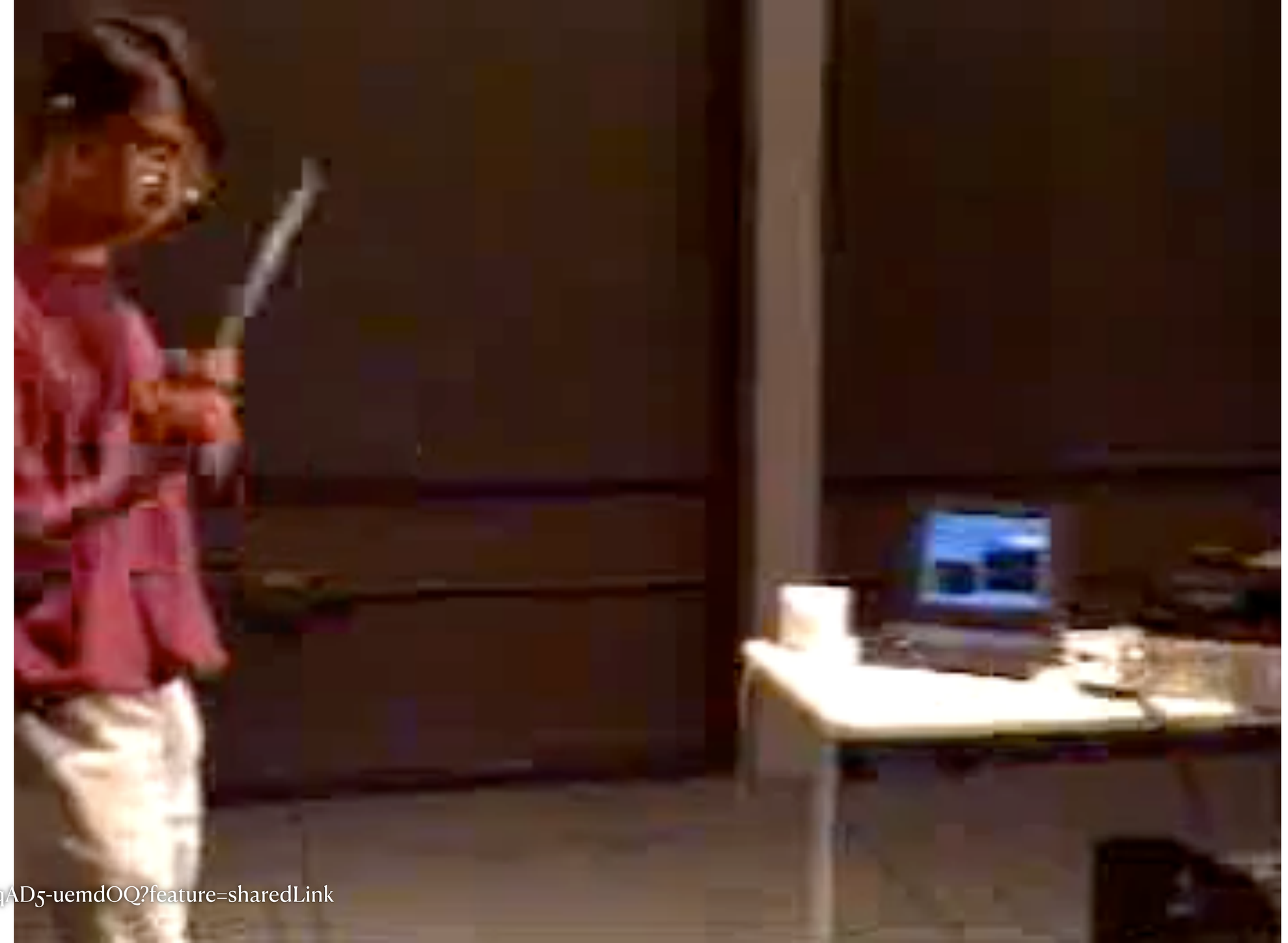
https://youtu.be/Lnpj7MSRFYM?feature=shared

UBS Virtual Maestro (aka “Conductor Hero”)

Rationale for Selecting Wii Remote

https://youtu.be/eJuIS2-wdfU?feature=shared

Brain Opera: Digital Baton



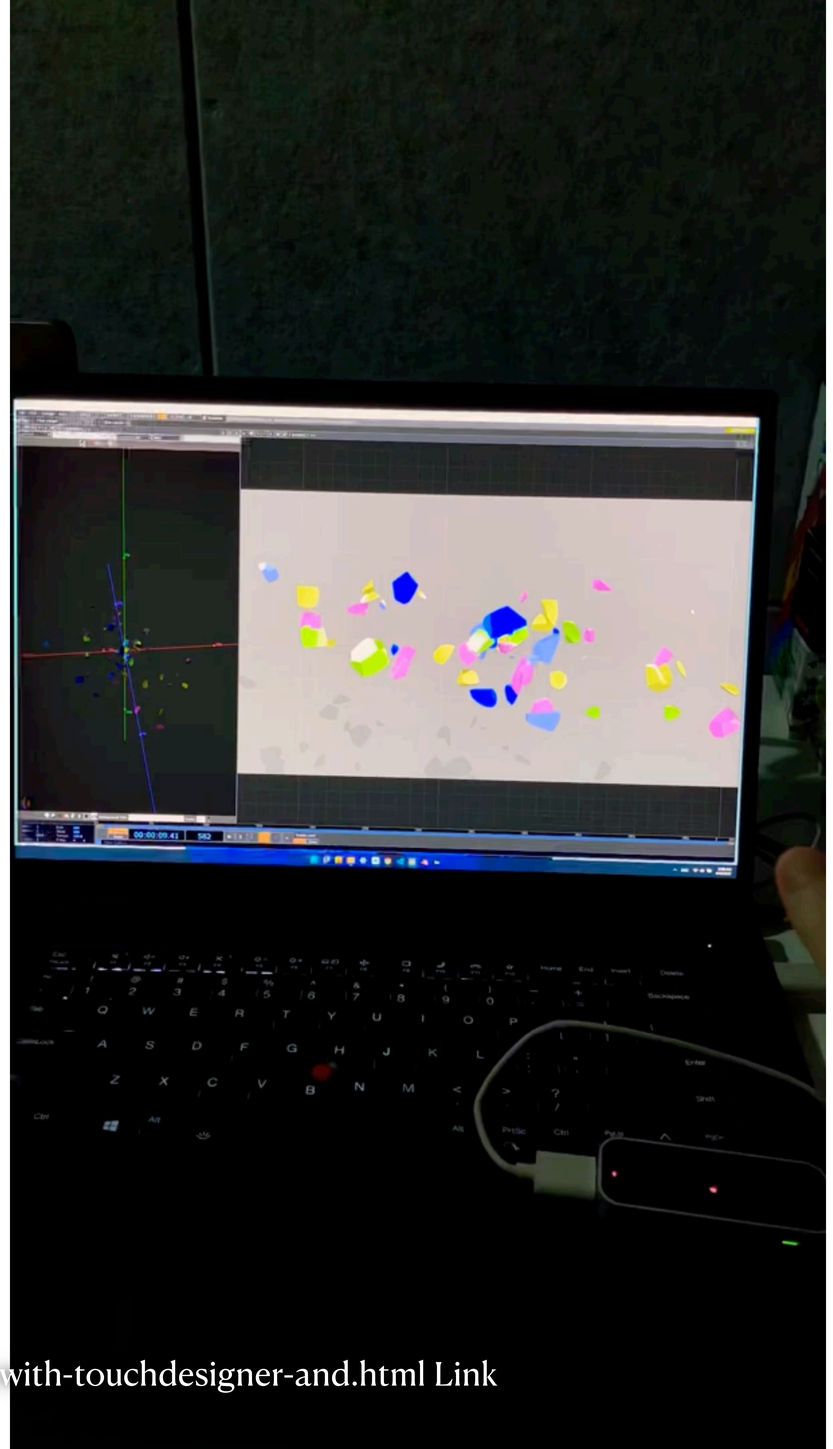
https://youtu.be/qAD5-uemdOQ?feature=sharedLink

Brain Opera: Sensor Chair

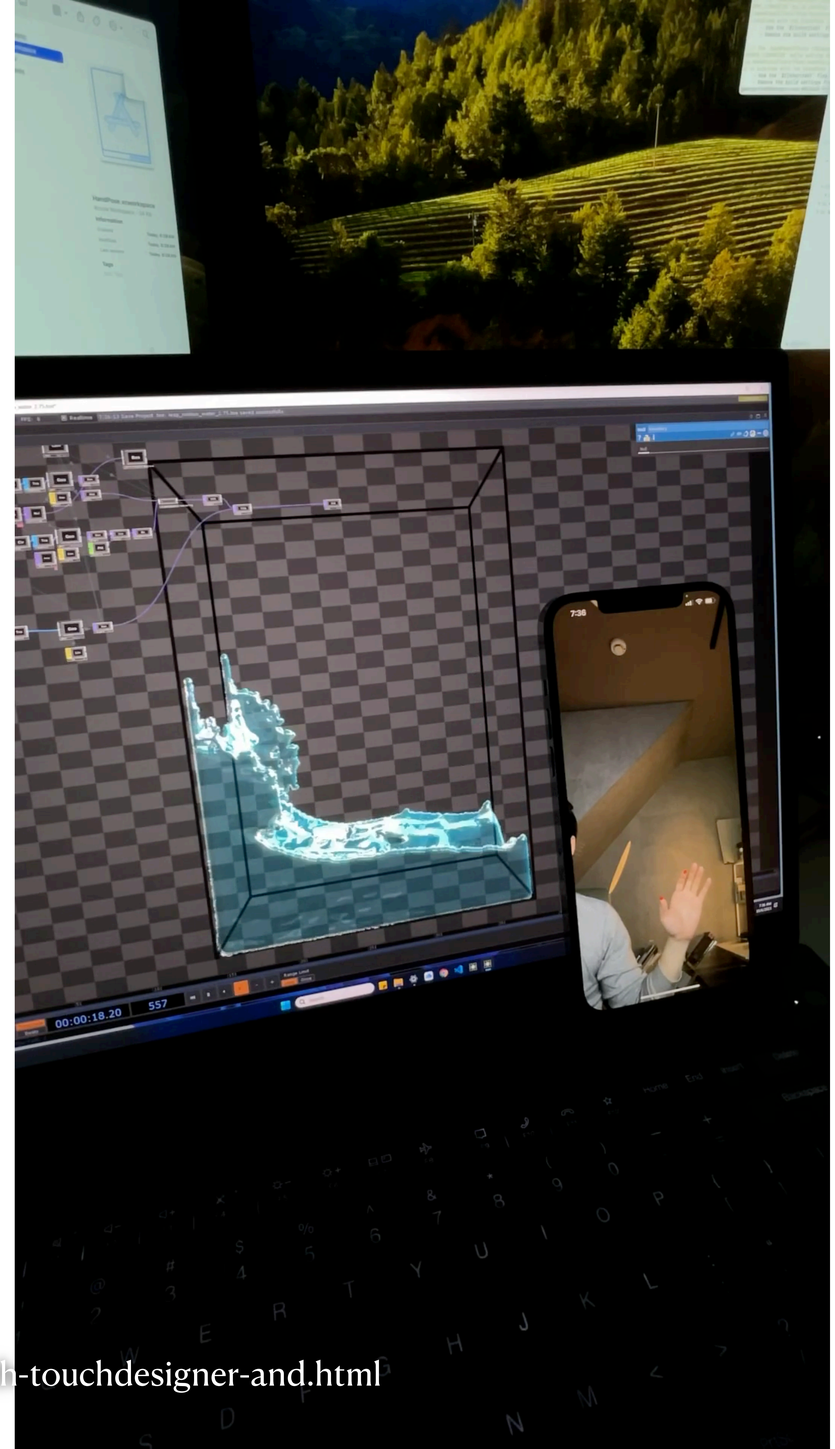
https://youtu.be/qAD5-uemdOQ?feature=sharedLink

Leap Motion

Link



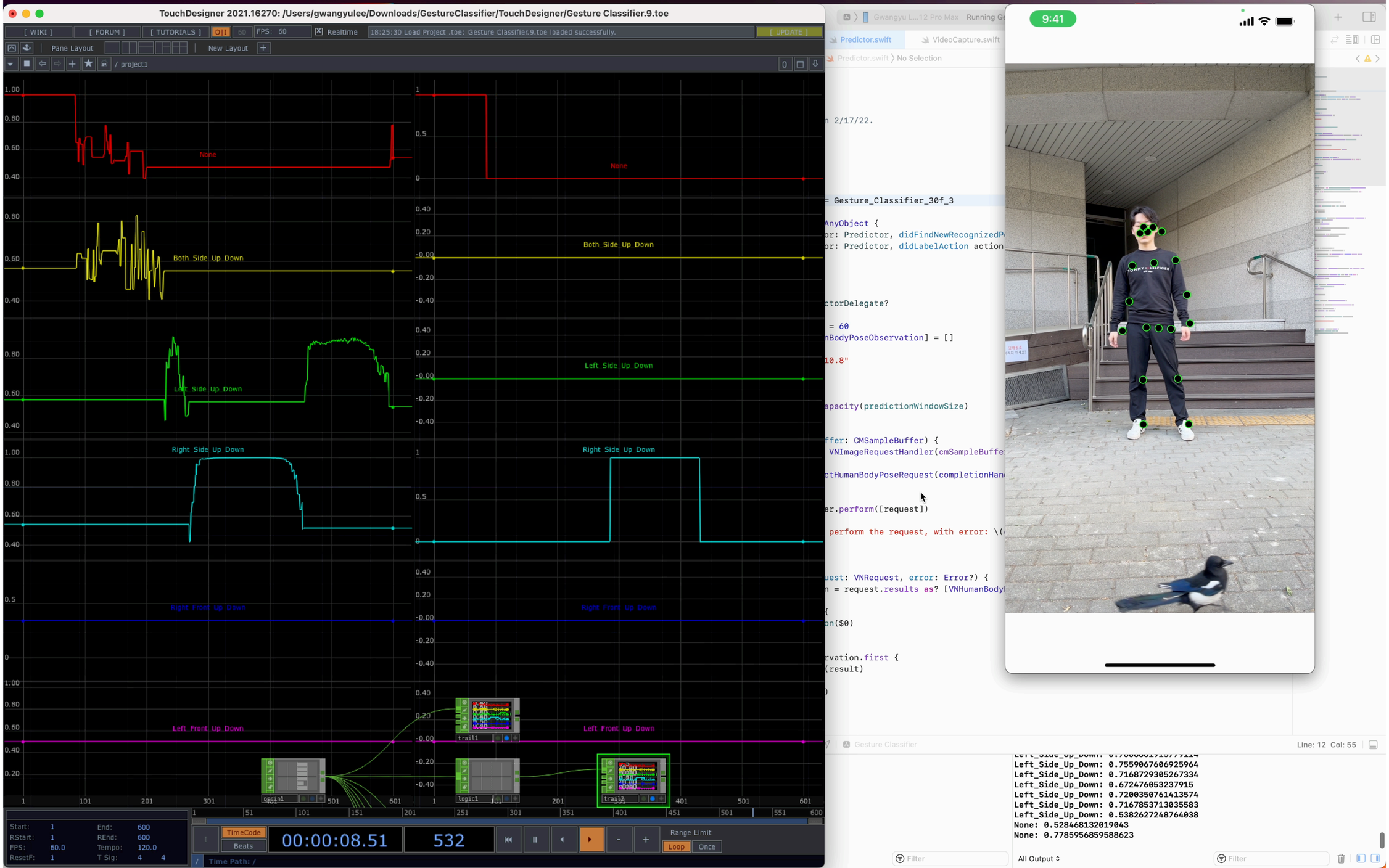
https://www.gwangyulee.com/2022/04/destroyed-sphere-with-touchdesigner-and.html Link

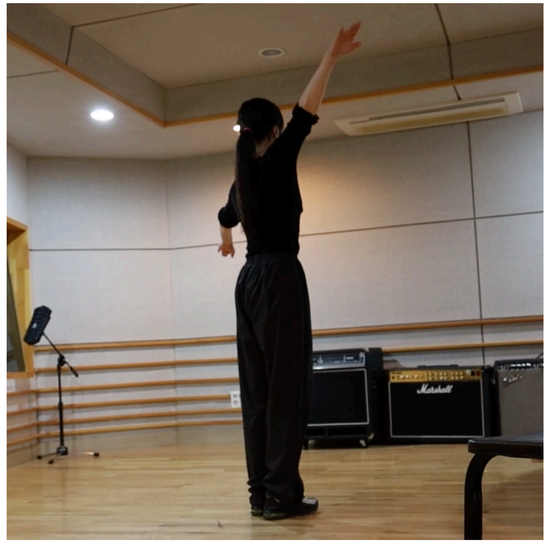


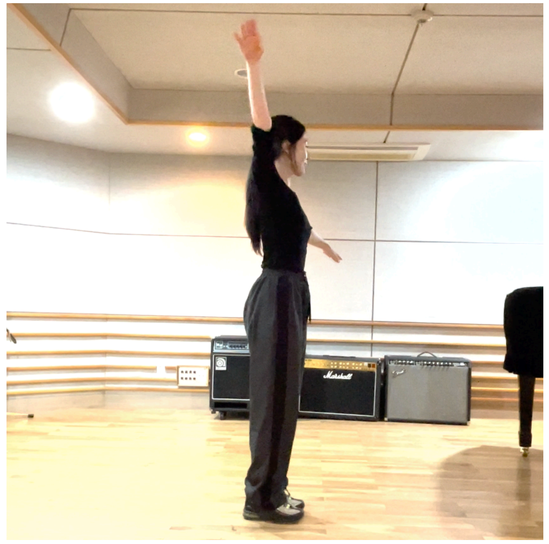
https://www.gwangyulee.com/2023/10/real-time-wave-with-touchdesigner-and.html

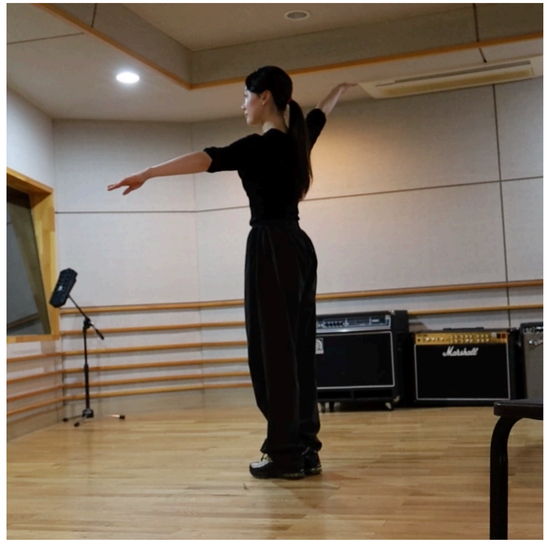
Link

Machine Learning


TouchDesigner File Edit Dialogs View Window Help
Mon May 16 6:40 PM
TouchDesigner 2021.16270: /Users/gwangyulee/Downloads/GestureClassifier/TouchDesigner/Gesture Classifier.9.toe
[WIKI] [FORUM] [TUTORIALS] FPS: 60 Realtime
18:25:30 Load Project .toe: Gesture Classifier.9.toe loaded successfully.
[UPDATE]
Pane Layout
New Layout
/ project1
None
Both Side Up Down
Left Side Up Down
Right Side Up Down
Right Front Up Down
Left Front Up Down
trail1
logic1
trail2
Start: 1
RStart: 1
FPS: 60.0
ResetF: 1
End: 600
REnd: 600
Tempo: 120.0
T Sig: 4 4
TimeCode
Beats
00:00:08.51
532
Range Limit
Loop
Once
Time Path: /
9:41
Predictor.swift
VideoCapture.swift
Gesture_Classifier_30f_3
Left_Side_Up_Down: 0.7559067606925964
Left_Side_Up_Down: 0.7168729305267334
Left_Side_Up_Down: 0.672476053237915
Left_Side_Up_Down: 0.7200350761413574
Left_Side_Up_Down: 0.7167853713035583
Left_Side_Up_Down: 0.5382627248764038
None: 0.528468132019043
None: 0.7785956859588623
All Output
Gesture Classifier
Line: 12 Col: 55







https://www.gwangyulee.com/2022/11/decimalinteractive-audio-visualization.html