

GESTURE CONTROL SYSTEM

---

PANGU

Charlie Shi, MTEC-498, Oct/1/2025



Multi-Camera Gesture Recognition

Angle One Camera



FPS: 0

Offline

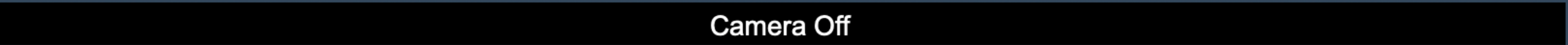
Camera:

Start

Stop

Test

Angle Two Camera



FPS: 0

Offline

Camera:

Start

Stop

Test

OAK-D Pro W PoE (Depth/Location)



FPS: 0

Offline

Start OAK-D

Stop OAK-D

Depth: 

0mm

System Controls

Start All Cameras

Stop All Cameras

Test Data Flow

Scan Cameras

Reset Audio

Gesture Data

angleOne:  

None

angleTwo:  

None

oakDPro:  

None

Gesture History:

Clear History

Audio Controls

Volume: % 

50%

Pan X: 

0.0

Pan Y: 

0.0

Pan Z: 

0.0

Reverb: % 

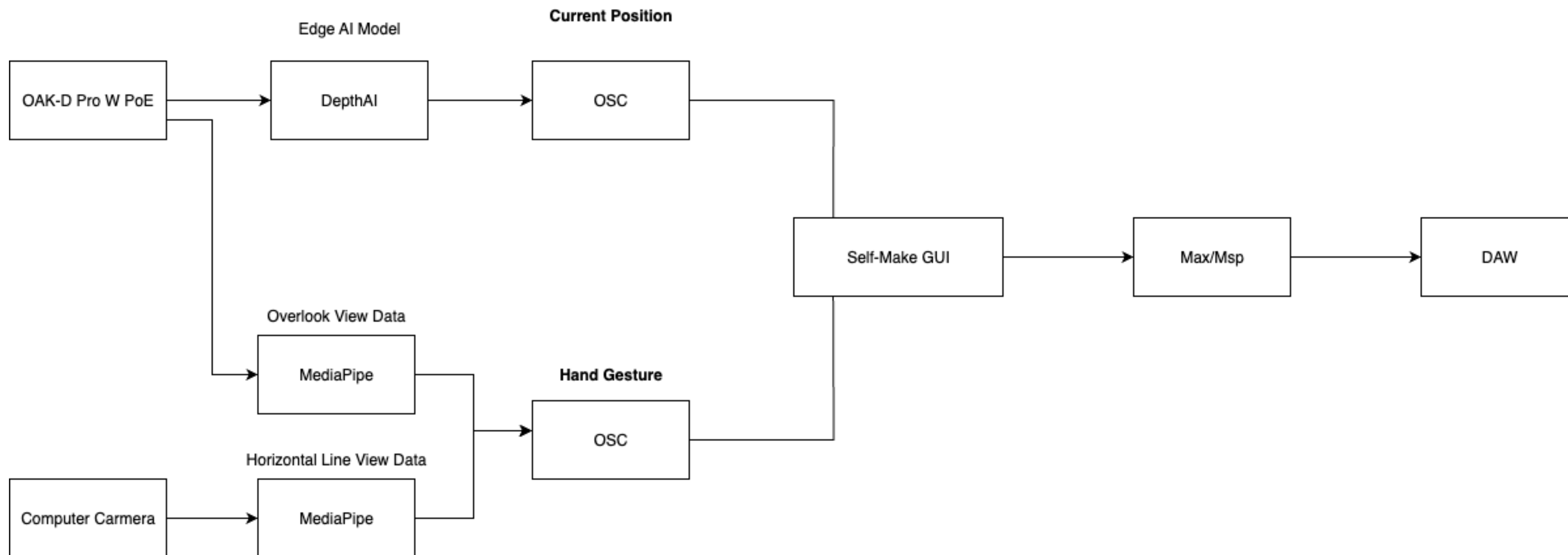
30%

Filter: Hz 

1000 Hz

3D Position (XYZ)

# ACHIEVEMENTS



## ACHIEVEMENTS

1. I had Make a GUI for PAN using Python and get the data from the pipeline in Depth Ai
2. Two horizontal line Camera plus one over head depth camera connected
3. Test it running though Windows and Mac
4. Mediapipe installed and recognize the Gesture correctly



## PROBLEMS

1. Different tracking method, I had used Vive tracker, IMU and final result become de analyze and machine vision.
2. GUI Making
3. Data message send to Max/Msp and issue with the port

## FUTURE WORK

1. Be able to fix the problem with sending the data to Max/Msp
2. Design a max for live plugin that can use in the DAW
3. Design GUI
4. If possible link using 3D mapping to do some interactive method

TEXT

---

## ASSESSMENT

I feel pretty confident in this state all the system work now coming to the max and music part I don't think there will be a problem or something bad happen :(