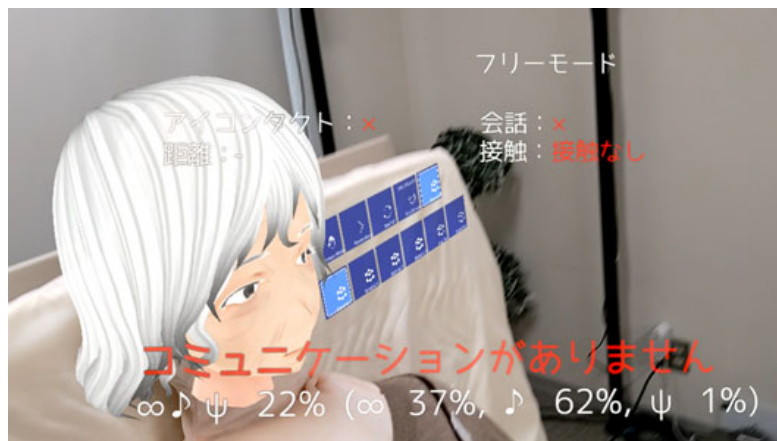


# HEARTS 4 Manual



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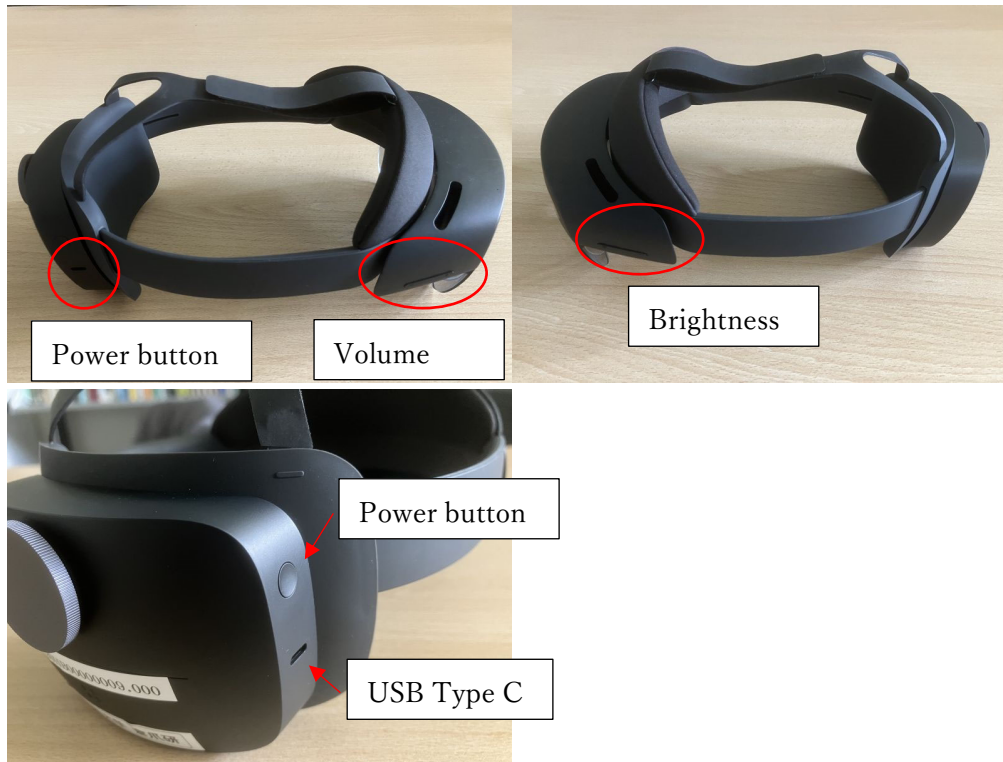
<https://github.com/Kurazume/HEARTS>

## Hardware

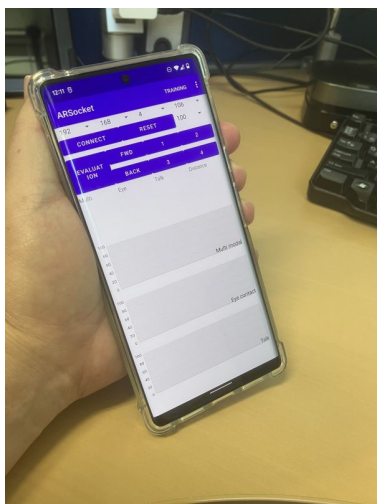
HEARTS 4 runs on HoloLens 2 and NrealLight.

Android smartphone can be used as a remote controller.

### HoloLens 2 (Required)



### Android smartphone (Optional)



### NrealLight (Optional)



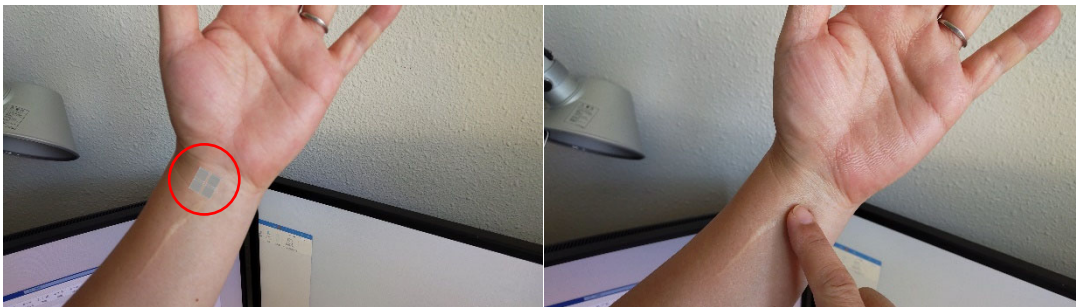
## HoloLens application

- How to start “HEARTS” application.

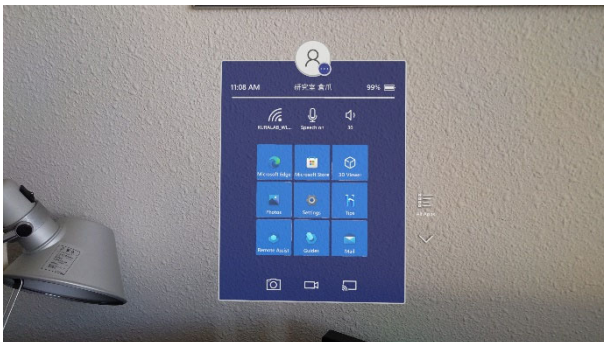
1. Push power button and wear HoloLens 2.



2. Tap your wrist by index finger.

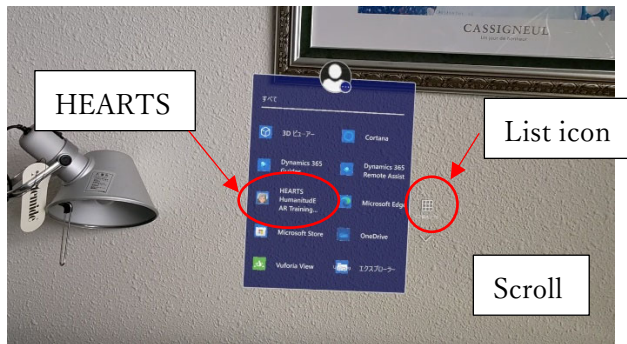


3. Menu appears.

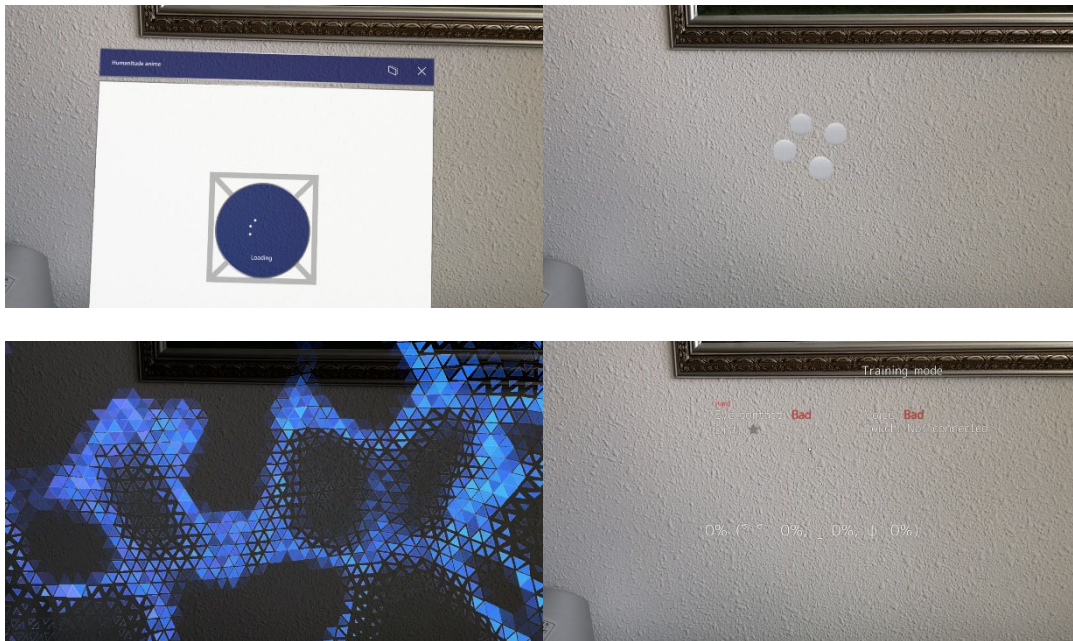


4. Tap “HEARTS Humanitide AR Training ...” icon.

If you cannot find the icon, tap the list icon on the right and scroll down the list.



5. Start “HEARTS” application.



● How to use “HEARTS” application.

1. Place the avatar's face on the doll's face or other appropriate positions.

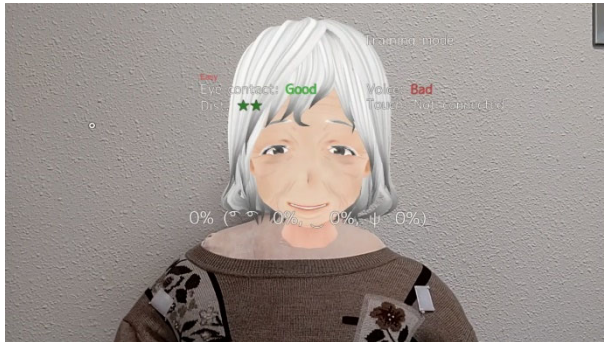
Say “Reset”.





Move the avatar's face to the proper position.

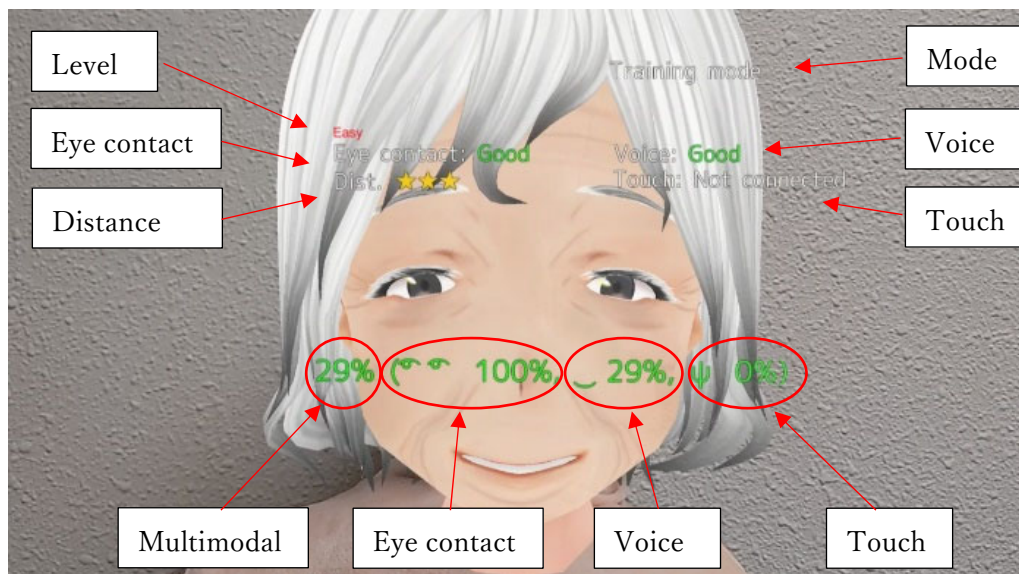
Then, say "Reset" again.



You can use the smartphone application (explained later).

## 2. How to start/stop the evaluation.

Say "Evaluation". The scores will be changed.



Multimodal score = Time at least two modalities are used / Total time \* 100

Eye contact score = Time to detect eye contact / Total time \* 100

Voice score = Time to detect voice / Total time \* 100

Touch score = Time to detect touch / Total time \* 100

Level: Easy, Medium, Hard

Eye contact, Voice: Good or Bad

Distance: ★(>140cm), ★★(70~140cm), ★★★(<70cm)

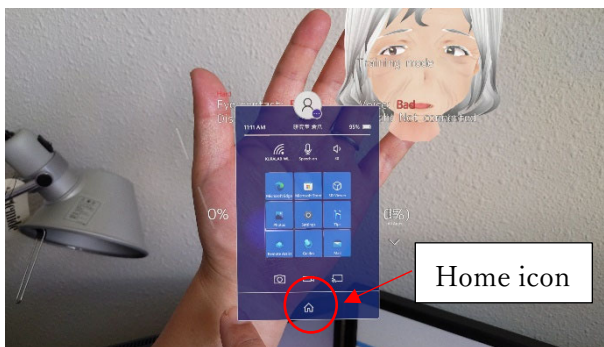
Touch: "Not connected", "No contact", "Good", "Too strong", "Touch shoulders or back"  
(Scenario mode only)

- How to shutdown “HEARTS” application.

1. Tap your wrist by index finger.



2. Tap the Home icon on the bottom of the menu.



3. Blank window appears.



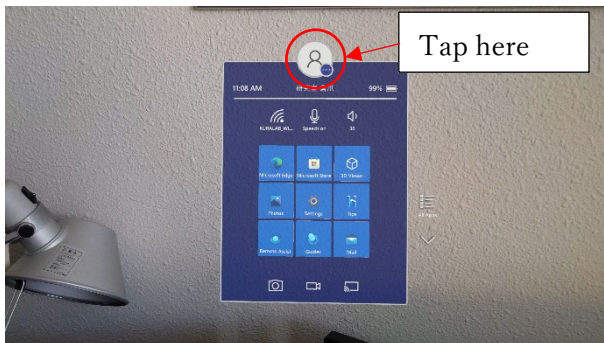
4. Press × on the upper-right corner to close the application.



5. The application shutdowns.



6. Shutdown HoloLens 2.



## Smartphone application

- Download and install the smartphone application.  
Permission may be required to install it from google drive.

[https://drive.google.com/file/d/1mxolErebUfbyi4HmqSdmMvHaNNVckyc5/view?usp=share\\_link](https://drive.google.com/file/d/1mxolErebUfbyi4HmqSdmMvHaNNVckyc5/view?usp=share_link)



The smartphone should be connected to HoloLens 2 via Bluetooth previously.

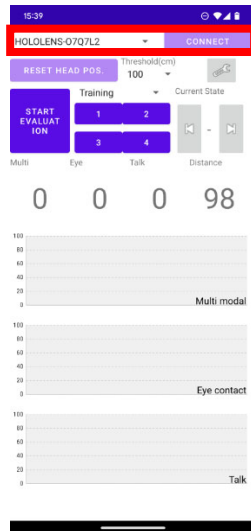
- How to use the smartphone application.
  1. Press “ARSocket” icon.



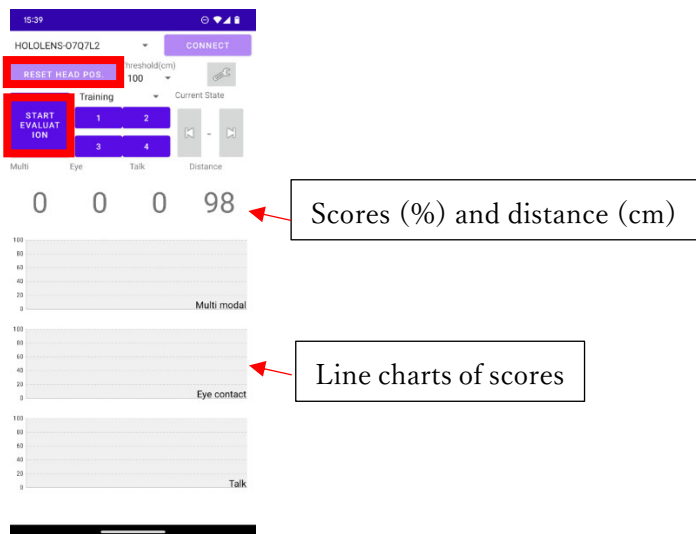


- Choose the name of HoloLens 2, and press “CONNECT” button.

If the name of HoloLens 2 is not found, check Bluetooth connection.



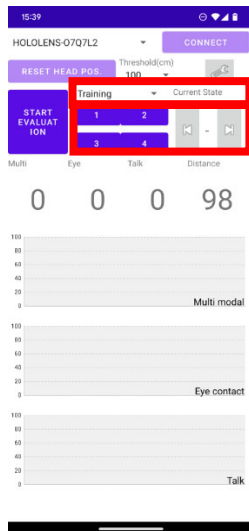
- Press “RESET HEAD POS.” or “START EVALUATION” buttons.




- Select the mode from Training or Scenario.

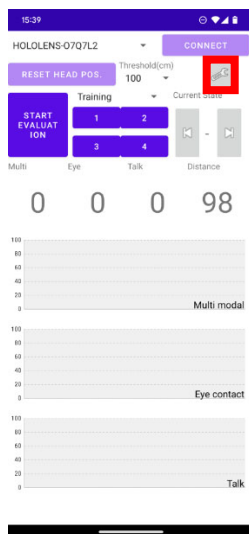
Training mode: Free training and skill evaluation.

Scenario mode: Training according to four scenarios.

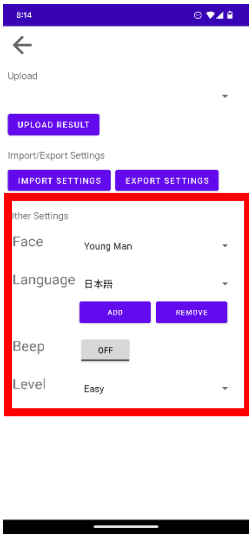


5. The application settings can be changed from the setting page.

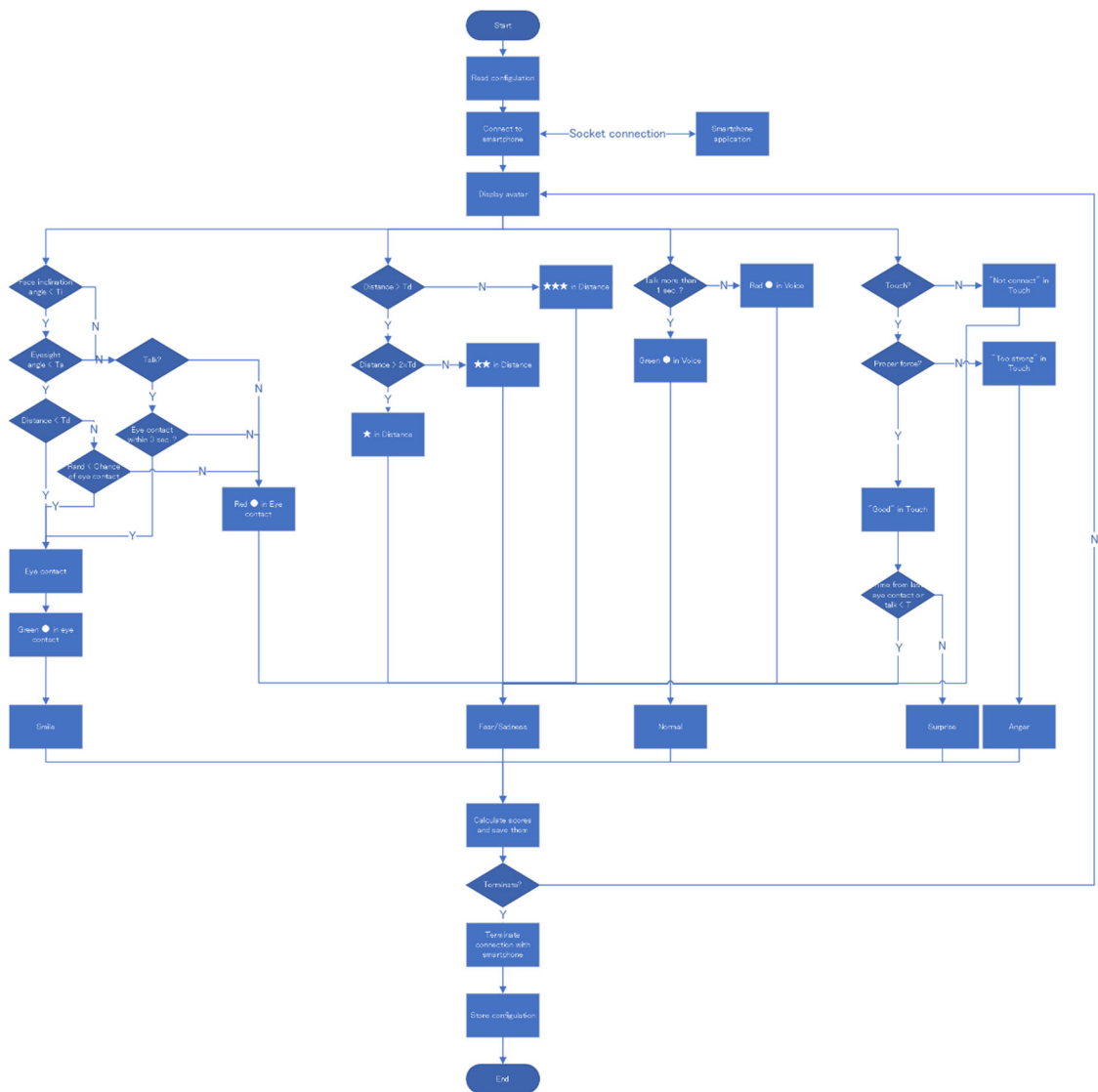
To open the page, press  icon.



Face	Young Man/Young Lady/Old Man/ Old Lady/Real Old Lady
Language	日本語/English
Beep	On/Off
Level	Easy/Medium/Hard



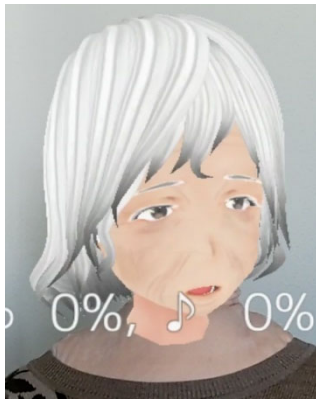
## Flow chart



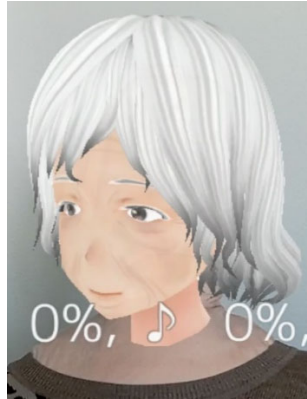


## Facial expression

No communication  
(Fear/Sadness)



Voice  
(Normal)



Eye contact  
(Smile)



Sudden or strong touch  
(Surprise/Anger)



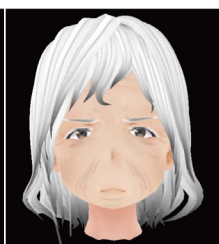
Gentle touch  
(Smile)



Smile



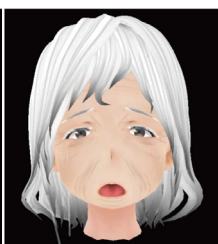
Anger



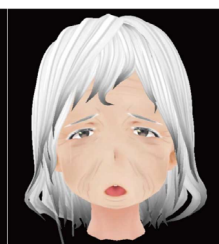
Surprise



Sadness



Fear



Five models

Old Lady



Young Lady



Old Man



Young Man



Realistic Old Lady

