Re-present Technical Documentation

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Hardware Checklist

GENERAL GUIDELINE ON HARDWARE

*** DO NOT MOVE THE OCULUS SENSORS ***

*** DO NOT MOVE KINECT ***

* While running the App, **do not touch the Oculus logo button under the A button** on the right-hand Oculus controller. (Figure 1.0) If you accidently press the button, press it again and it will bring you back to the App.

Figure 1.0 Button

Step 1. Start the computer.

The power button is an alien face. Click on the button and it will boot up.

Step 2. Check if the internet is connected (either wired or wireless).

The internet is necessary for Watson (Voice analysis we used in this product) to retrieve voice related results. Make sure that the internet is activated/ connected.
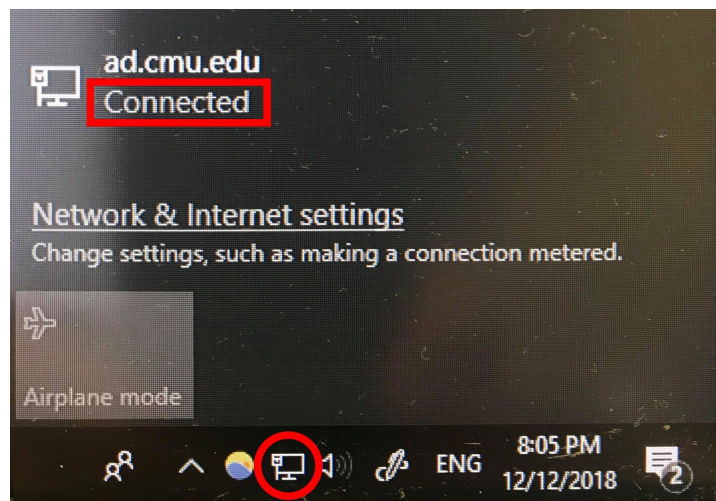

Figure 1.1 Screenshot of internet connection

If the wired internet is not activated, **unplug the internet cable if the cable is connected,** check the wifi setting and connect to the *CMU-SECURE.* (Figure 1.2, 1.3)
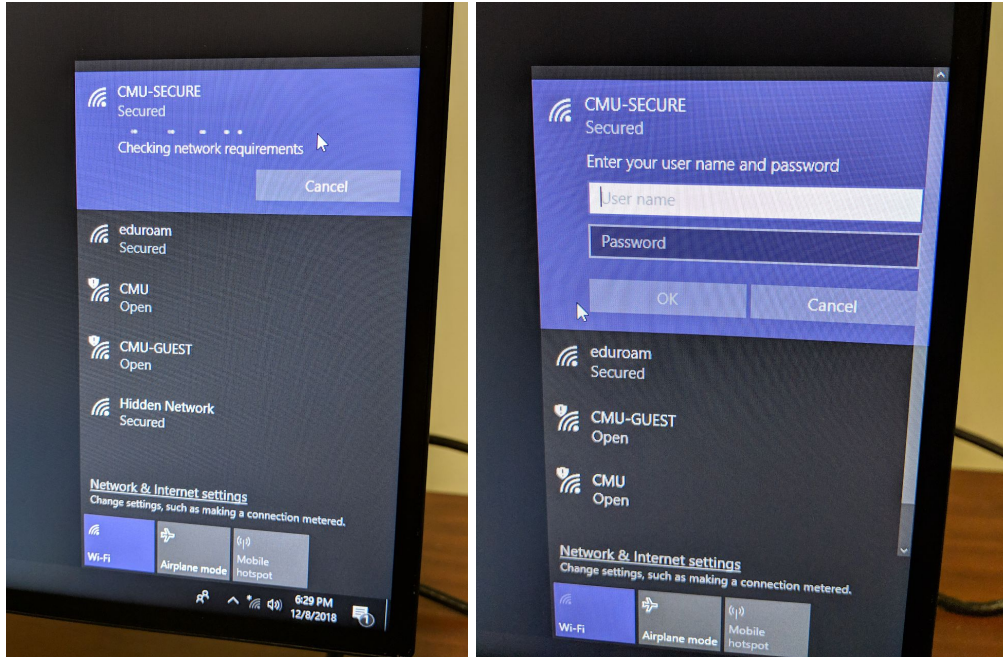
Figure 1.2, 1.3 CMU-SECURE

Step 3. Start the App by double clicking the **Represent Shortcut** icon. (Figure 1.4)
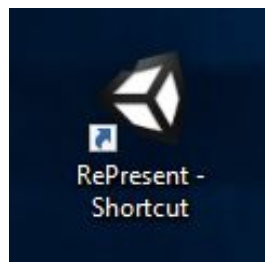

Figure 1.4 App icon

When the App starts, Kinect and Oculus will boot up automatically.
Check Kinect first (Step 4).

Figure 2.1 Kinect

Step 4. When the App is running, **the Xbox icon light should be on.** If the light is on, you may jump to Step 5. (Figure 2.1)

If the light is not lit: find the hub (Figure 2.2) and **check if the white light is on**. If not, try to reconnect all the wires that are connected to the hub.

Figure 2.2 Kinect hub

Kinect is both connected to the power outlet and the computer. First, reconnect the power cord to the outlet. (Figure 2.3) Next, check the usb port if it is connected; make sure it is connected to **USB 3.0**, which has a usb icon with **SS Mark**. (Figure 2.4)

Figure 2.3 Outlet

Figure 2.4 Kinect USB port

Open **SDK Browser v2.0 (Kinect for Windows)** on the Desktop. (Figure 2.5)
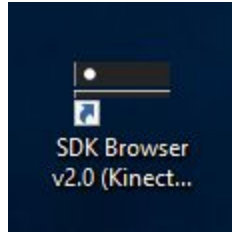
Figure 2.5 Kinect SDK Browser

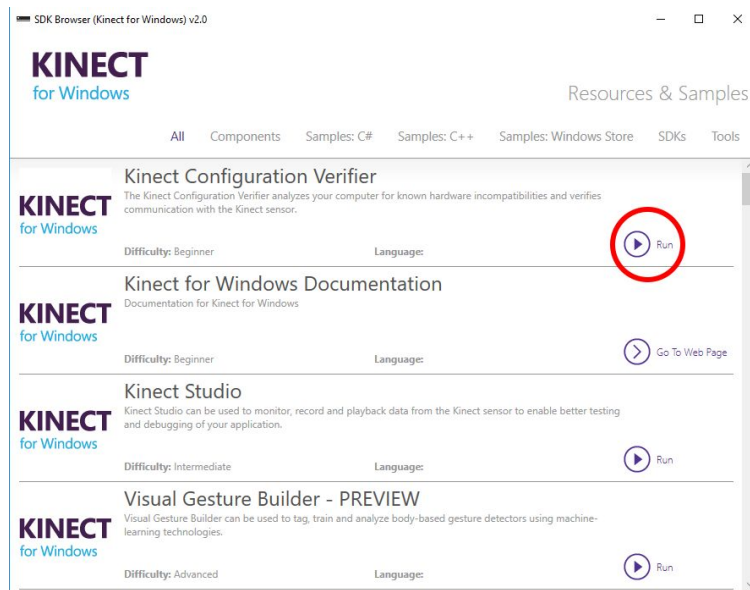Once you open the Kinect SDK Browser, you will see the below list. (Figure 2.6)

Figure 2.6 Kinect SDK Browser list

Run the **Kinect configuration verifier**. Once it runs the configuration process, it will show you a result as below. The Xbox icon light should be on when you are using this **Kinect configuration verifier.** Make sure **Kinect Connected has a green mark** on the left side. (Figure 2.7)
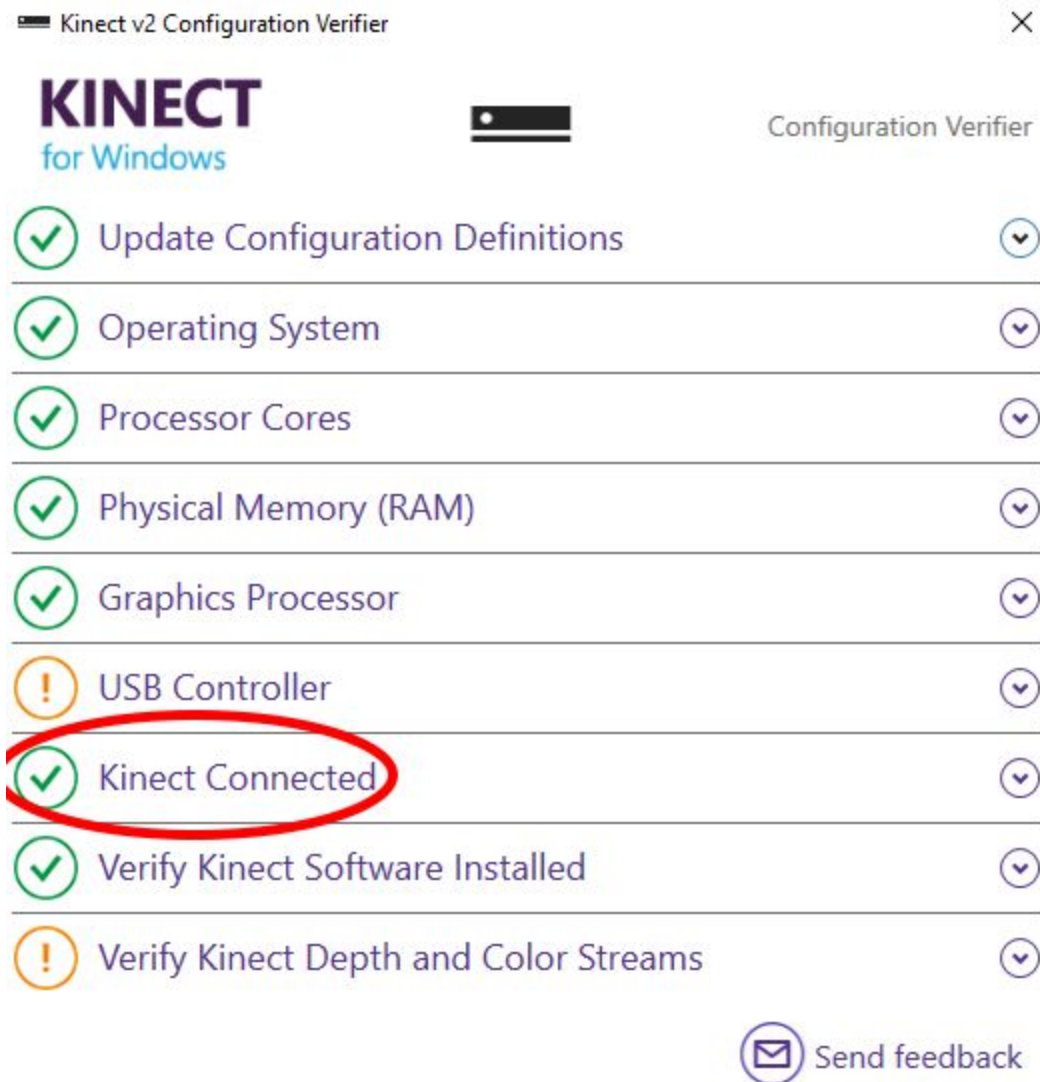
Figure 2.7 Kinect configuration verifier

If Kinect Connected has a **red mark (Not Connected)**: **restart the computer and go back to Step 2.**

No matter the issue is resolved or not, make sure you close Kinect configuration verifier and SDK Browser v2.0 before you run the Re-present App again.

Step 5. Put on the Oculus headset. If you can see the **white space with ambient sound**, you may jump to Step 6.

If you can't see the space: take off the headset, and see if the white light is lit. (Figure 3.1)

Figure 3.1 Oculus headset

If the light is not on/If it is orange: open **Oculus software**. (Figure 3.2)

Figure 3.2 Oculus software

You will see Oculus Home page similar to the image below. (Figure 3.3)
Note: The content might be different from the image, but the layout should be the same (specially for the menus on the left side).
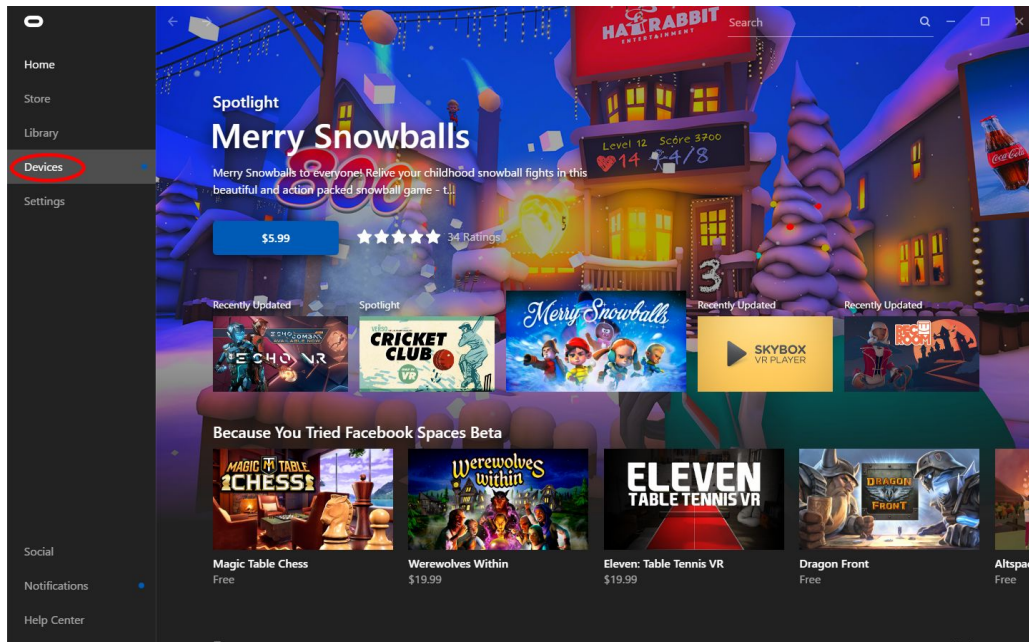
Figure 3.3 Oculus software landing page

Click on the **Devices** menu on the left side that brings you to the device list, it should look the same as the image below. Check if **Rift and the two Sensors** are all **Connected**. (Figure 3.4.1)
Note: It is fine to have Warning, but not recommended.
Note: Left Touch and **Right Touch** may be **Standby**, it will be **Connected** if you click any button on it. If it doesn't connect after you click on any button, the battery might be low. (See how to change the battery in Page 13).
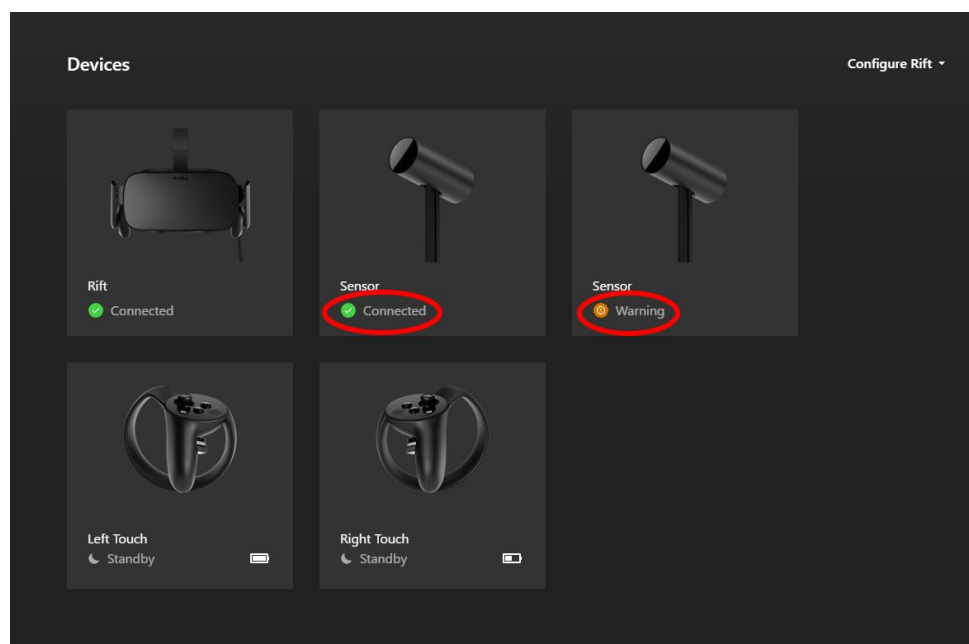
Figure 3.4.1 Devices

If Rift/Sensor is Not connected: first, try unplug and replug all the usb cords (back in the same port). If it does not work out, you need to setup Oculus. You can find the setup on the right corner. (Figure 3.4.2)
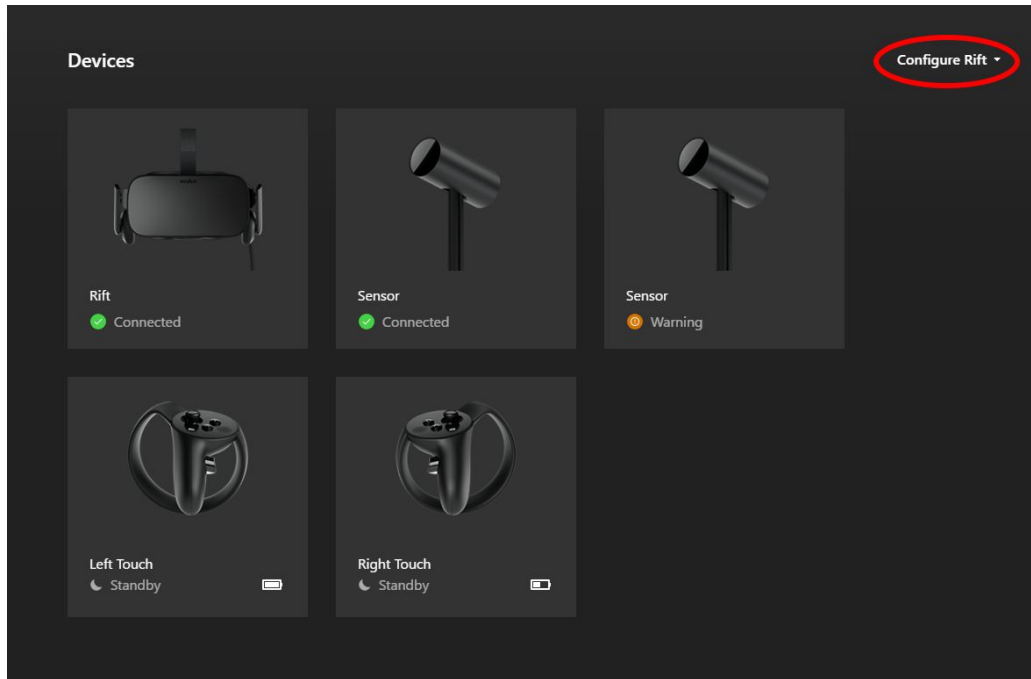

Figure 3.4.2 Devices

Click on the **Configure Rift**, then you will be able to see **Full Setup**. (Figure 3.5)
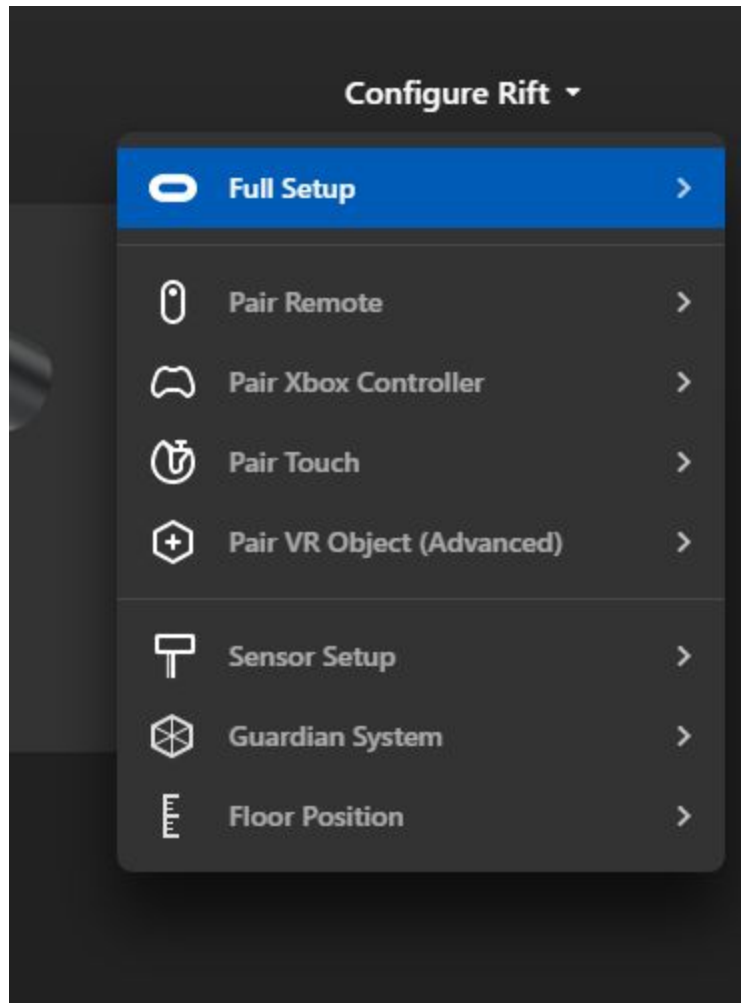Click **Full Setup**, a tutorial will guide you step by step. There will be a prompt where it asks your height, **input 186 cm(not your actual height)**.

Figure 3.5 Full setup

In **Devices Menu**, you can also check if the battery status is ok for the controllers. If the battery is low for a controller, replace the battery. To change the battery, slide out the hatch from the controller handle, replace it with a new AA battery, and put the hatch back on. (Figure 3.6, 3.7)
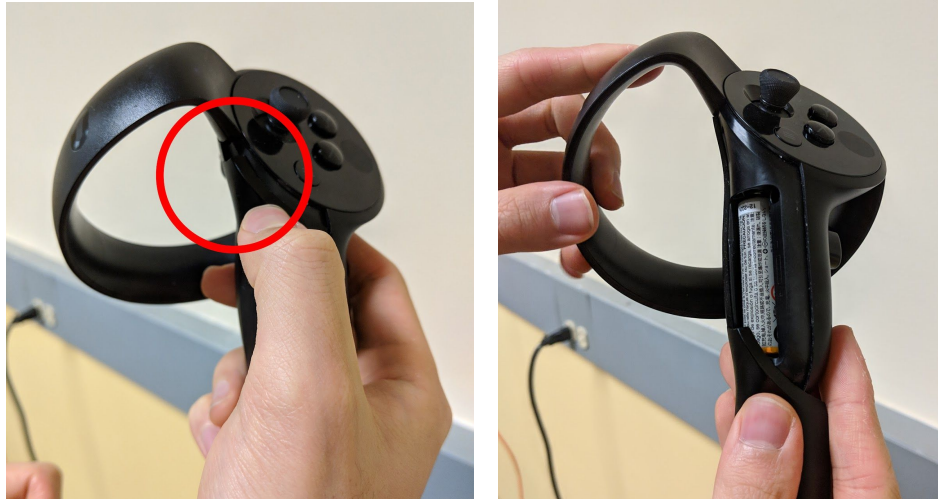
Figure 3.6, 3.7 Change controller battery

If you can't hear the sound, check the computer audio.
If the computer audio is working, click on the **Rift Icon** in **Device Menu**. (Figure 3.4)
A sidebar will come out from the right side. (Figure 3.8) Check if the Rift Headphone volume bar is too low.
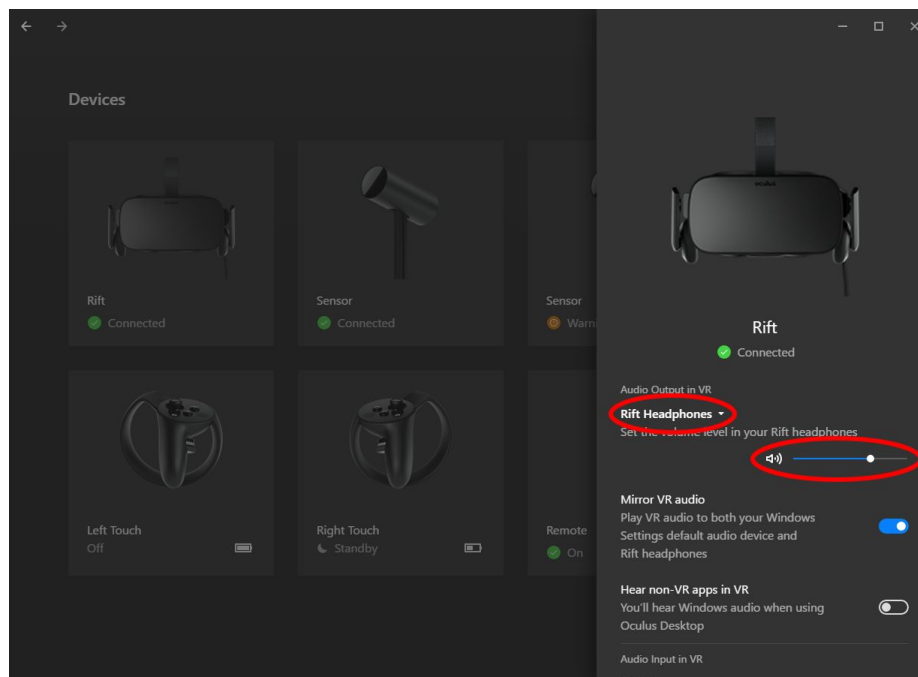

Figure 3.8 Oculus headset Volume

By default, when you run the application, you can only hear the sound with the Rift Headphones. If you want to hear the sound on the computer as well (or with other headphones), under "**Mirror VR audio**" click on the button to enable it. (Figure 3.9)

Figure 3.9 Oculus headset audio

Step 6. If all the devices work, the following image should be on the computer screen, and **the person in VR should be able to see his/her virtual hand and the clicker**. (Figure 4.1)
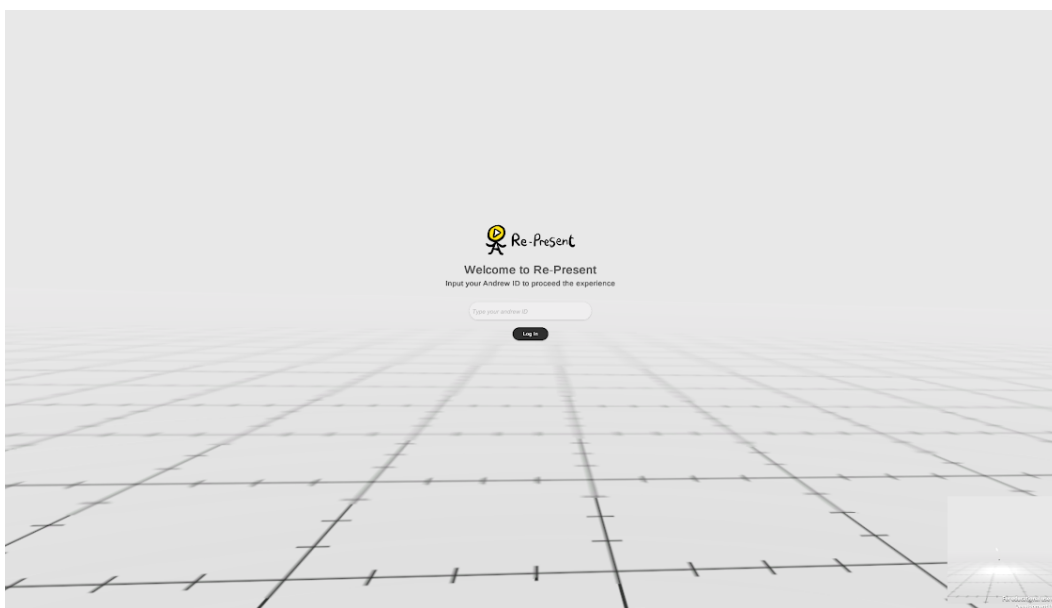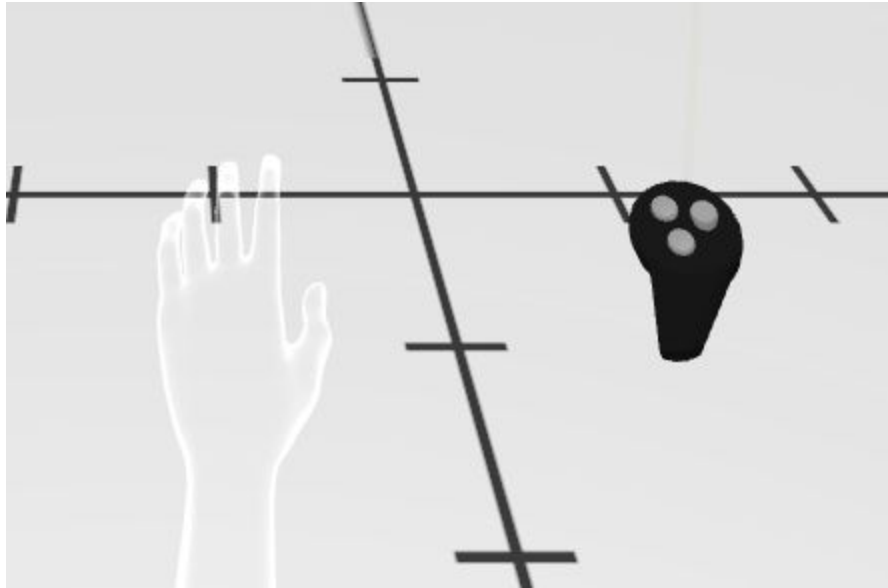

Figure 4.1.1 Landing page on Screen

Figure 4.1.2 Landing page in VR

Here, you need to type your **Andrew ID**.
Note: double check if you typed the correct Andrew ID. (You could do this by asking students to confirm again)
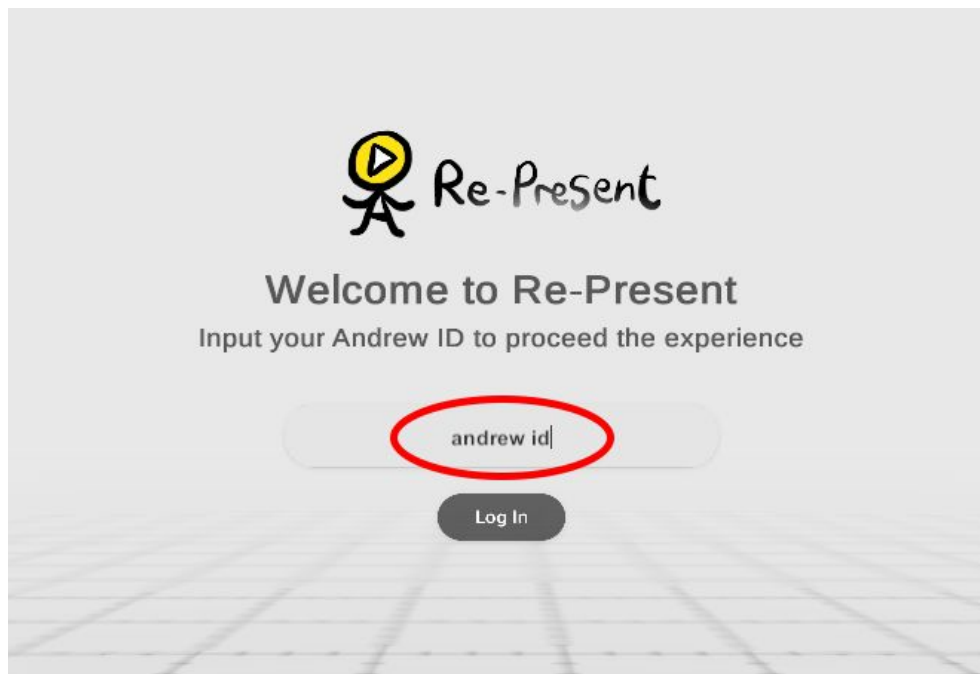If you accidently hit Log-in with a wrong ID: Exit, then restart the App. (Figure 4.2)

Figure 4.2 Log-in with Andrew ID

Step 7. Select mode. Practice Mode - Step 8; Review Mode - Step 10.5

After logging in, you will see the following image (figure 4.3) where you can choose either practice or review mode.
Note: If this is Andrew ID is using the App for the first time, there will be no session to review, you will see an empty page when you choose Review Mode.
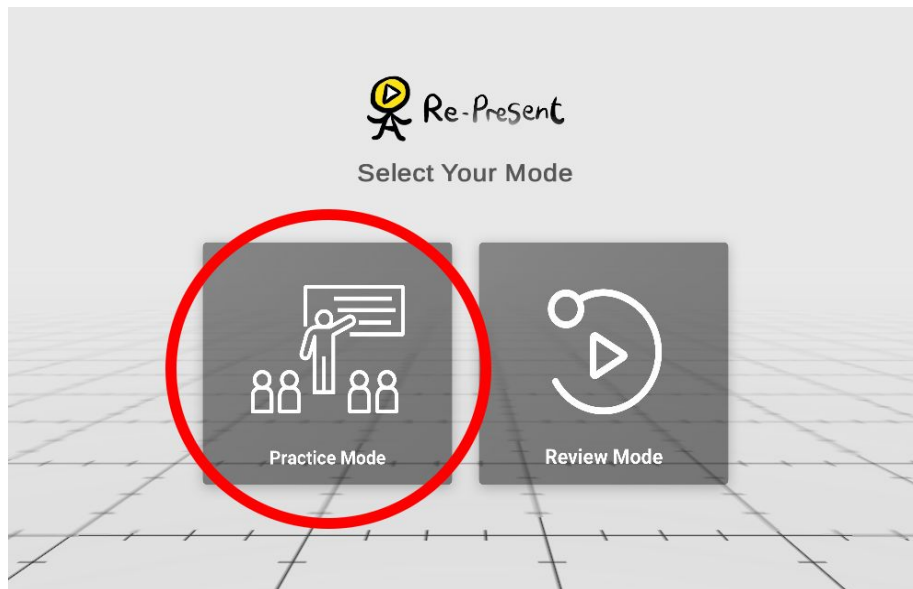

Figure 4.3 Select mode page

Step 8. Upload pdf file

By choosing practice mode, you have an option to upload a pdf file. **It is not a necessity.** You may proceed without uploading pdf. (Figure 4.4)
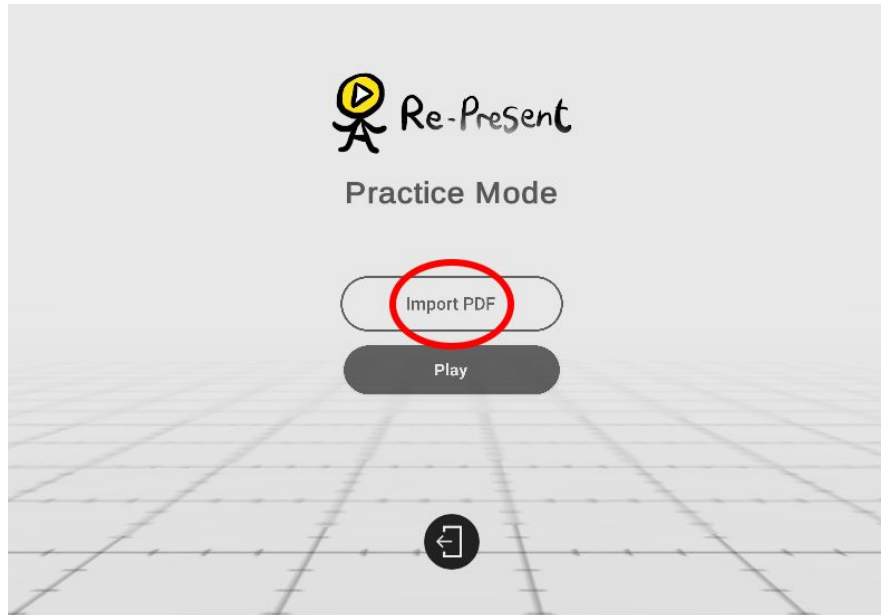
Figure 4.4 Practice mode

When you click the **Import PDF button**, it will show a prompt for you to navigate and select your pdf file. (Figure 4.5) Note that the **file format must be in pdf**. Based on the file size, it takes time to load. Once it finishes uploading the file, the button color will be changed into black. (Figure 4.6) You can re-upload your pdf file multiple times.
If you go back to the previous page (Figure 4.3), you should upload your pdf file again.
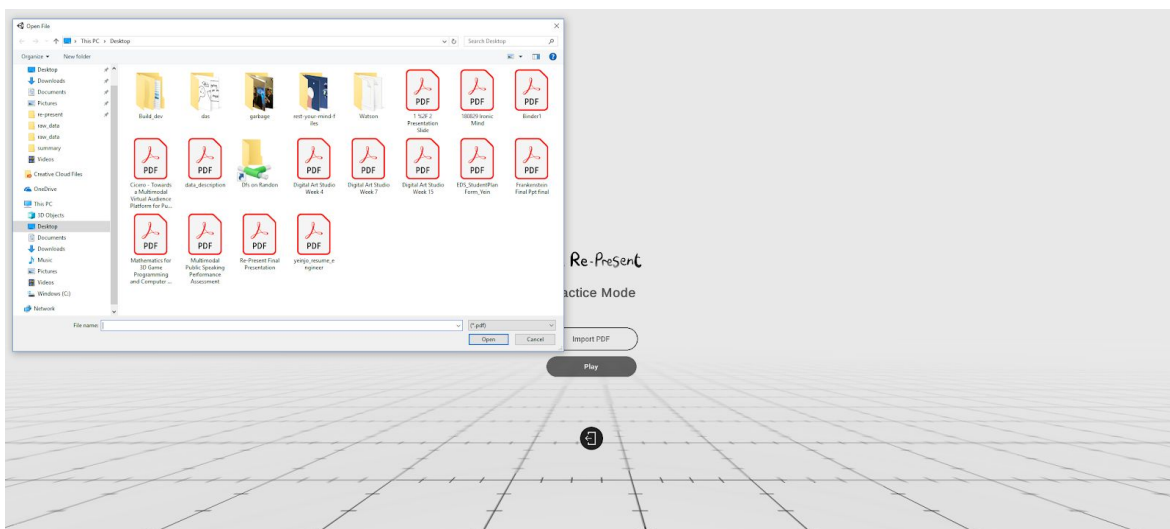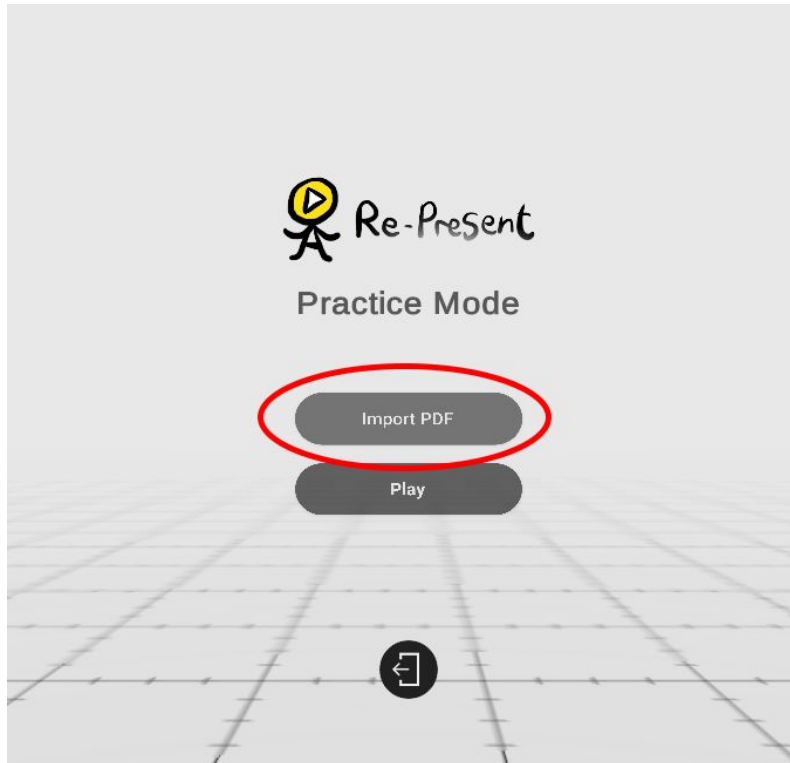

Figure 4.5 Import pdf

Figure 4.6 Finish uploading

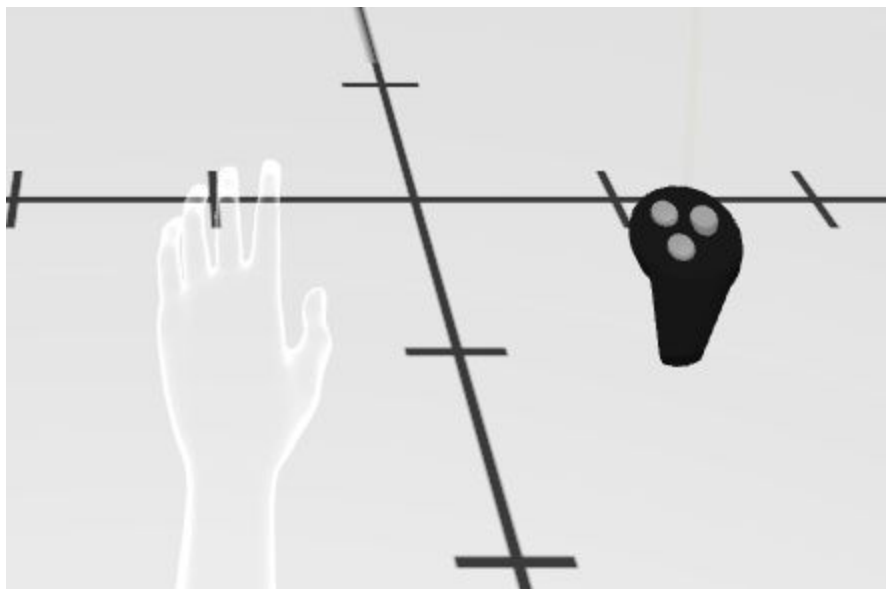## Step 8.5. Choose a comfortable hand to hold the virtual clicker

Figure 5.1 Default virtual controller setting

By default, you have a left hand with rim light and right hand with a clicker. (Figure 5.1) **Whichever hand you prefer, you could switch your virtual clicker by clicking on the joystick** on the Oculus controller. (Figure 5.2)

Figure 5.2, 5.3 Joystick on the Oculus controller

Figure 5.4 shows an image of a left hand held clicker and a right hand with rim light.

Figure 5.4 Switched clicker

Step 9. Enter the Practice Mode

Figure 6.0 Physical setting

Before entering the Practice Mode, make sure your front feet would match the green line. (Figure 6.0)

Once you hit Play, look at the minimap on the right corner and make sure there is **an AVATAR (a white wooden figure) MOVING**. In case where the avatar is either **not showing up**, (Figure 6.1) or it is in a **T-Pose** (Figure 6.2) go to the step 4 (Kinect).
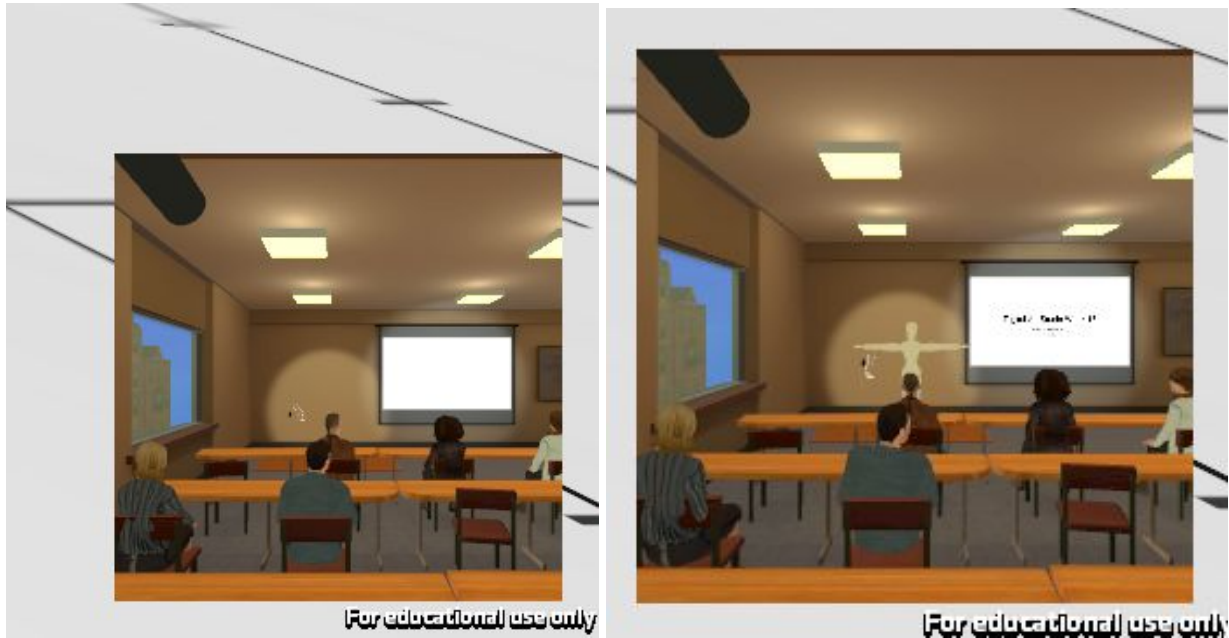
Figure 6.1, 6.2 Wooden figure when Kinect is not working properly

Once you enter the Practice Mode, it automatically starts in 5 seconds. You will be able to see a window that says **Start in (5-0) seconds** (Figure 6.3)

Figure 6.3 Count down in the practice mode

If you look down, you can see a confidence screen that shows the pdf that you have uploaded in the previous page, with two buttons. If there is no pdf file uploaded, it will be shown as a white blank. The yellow button on the left side is **Restart** button where it allows you to restart the presentation. The green button on the right side is **End speech**, where you can trigger once you are done with your presentation. (Figure 6.4)

Figure 6.4 Confidence screen and interaction

Here is step by step instruction how you interact with the buttons in VR: when you are not hovering on to any of the buttons, the laser from the virtual clicker will be desaturated and transparent. (Figure 6.5); once you hover to any interactive buttons, the button will be saturated as well as the laser. You can also hear the hovering sound (Figure 6.6); Now you can trigger your index finger button on the Oculus controller to actually activate the button. (Figure 6.7)

Figure 6.5 default laser

Figure 6.6 laser hovered to an interactive button

Figure 6.7, 6.8 Index trigger on the Oculus Controller

You can switch your slide by pressing A, B, X, and Y buttons on the Oculus controller. You can move **forward** by pressing either **A or X**, and move **backward** by pressing either **B or Y**. (Figure 7.1, 7.2, 7.3, 7.4)

Figure 7.1, 7.2 Switch slides (move forward)

Figure 7.3, 7.4 Switch slides (move backward)

Step 10. Enter the Summary page

Once you have finished your practice session, you can escape from the classroom by clicking on the **End speech** button that is on the confidence screen. (Figure 6.2) The app will bring you to the summary page with a window that says **Summary is loading.** (Figure 8.1)
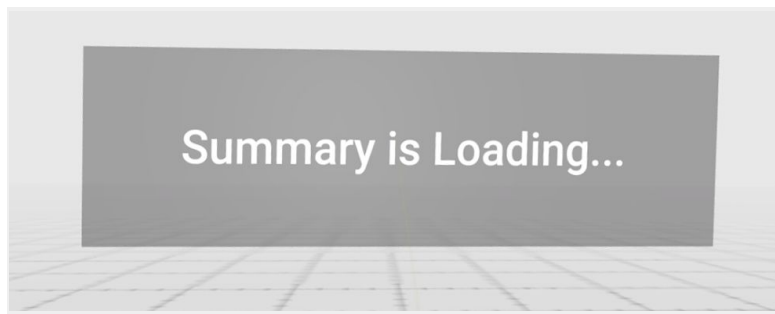
Figure 8.1 Summary loading window

It takes roughly 20-30 seconds to summary be loaded. We recommend **not to exit** the app until the summary is loaded. If you cannot proceed after a minute, quit and restart the app and go directly to the Review mode, there you will be able to see your session.
Once the summary is loaded, you can see voice result, including pauses with soundwave, top 3 filler words, total number of filler words, and the speaking pace. (Figure 8.2)

Figure 8.2 Example summary page (first page)

Under the summary page, there is a panel with three buttons, each indicating Exit, Go to Review, and Next page. (Figure 8.3)

Figure 8.3 Panel in the Summary page

If you click on the Next button on the far left, you can review your eye contact summary with a heat map that is visualized with a floor plan with circles that represent audience eye contact level with a color spectrum of red, yellow, and green, each indicating weak, moderate, and strong eye contact. (Figure 8.4) You can always switch the summary page by clicking the Next button.
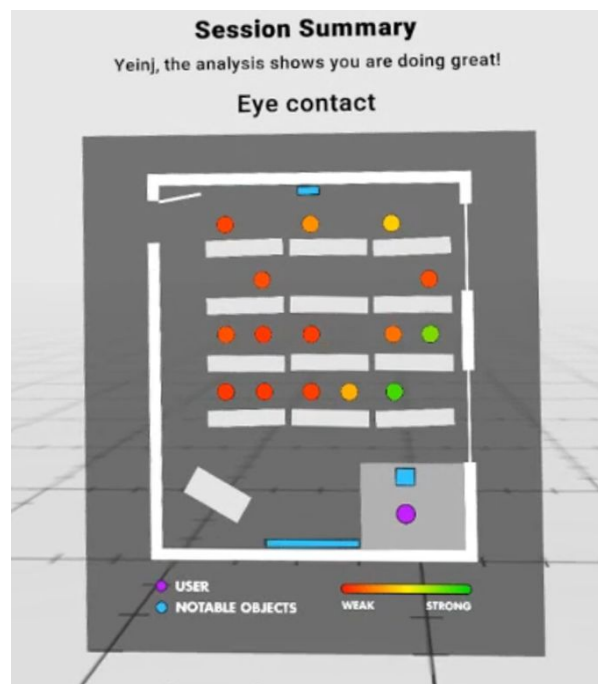
Figure 8.4 Eye contact heat map

In here, you can choose either exit the app and review your presentation later, or trigger Go to review button and start review your presentation.

Step 10.5. Before entering the Review mode

Now, a TA should guide a user to move slightly forward and bring a physical chair and place it to the orange X mark. (Figure 9.1) If there is no TA, you need to take off the headset and put it on the table, and bring a physical chair to the orange mark. Then, you need to bring your headset and sit on the chair. Once you feel comfortable, you may put on the headset.
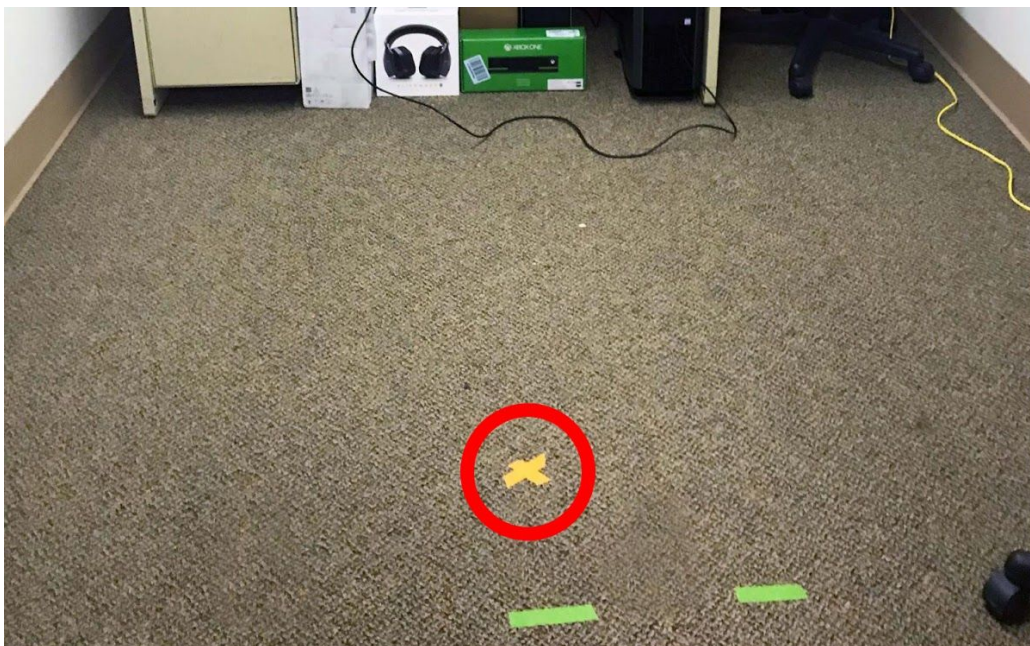
Figure 9.1 Physical setting, orange mark

Step 11. Enter the Review mode

This is the first scene when you enter the Review mode. (Figure 10.1)

Figure 10.1 Review mode

Here, a major tool that enables you to navigate between different moments is a timeline. You need to trigger the Play button in order to watch the play-back. (Figure 10.2)
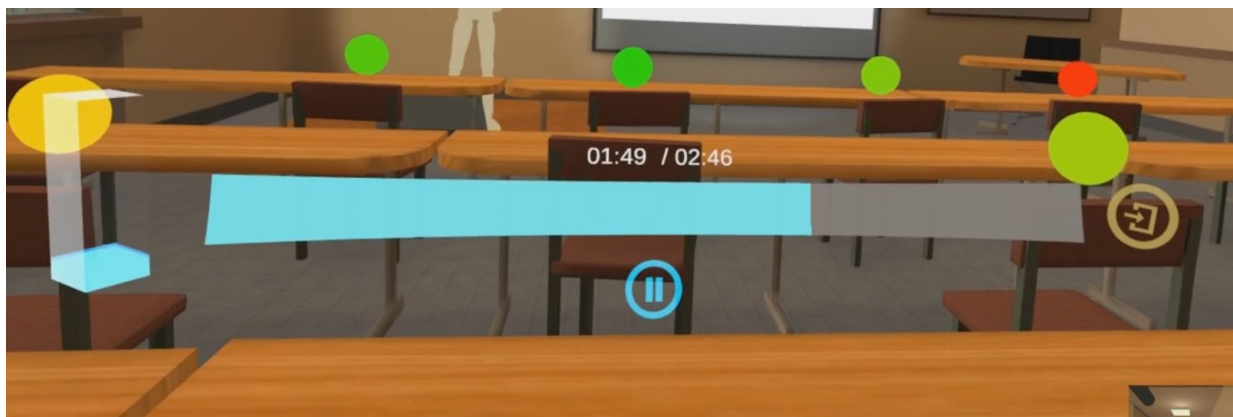
Figure 10.2 Timeline

You can play, pause and scrub on the timeline. (Figure 10.3)
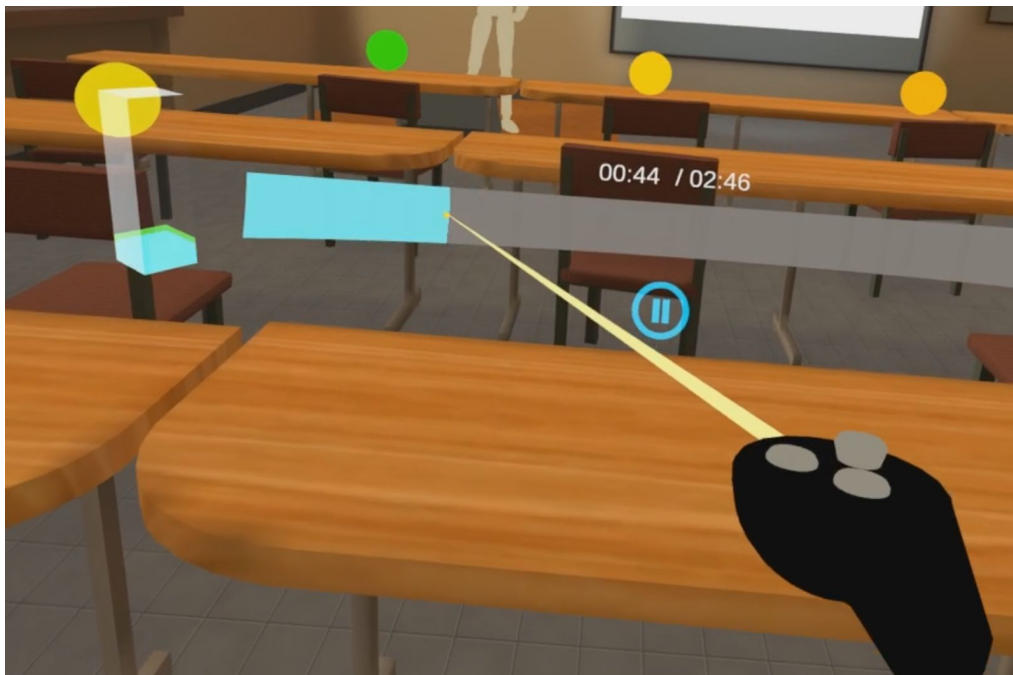
Figure 10.3 Scrub on the timeline

On the left side of the timeline, there is a volume bar that has a average volume marked with a sky blue color. (figure 10.4)
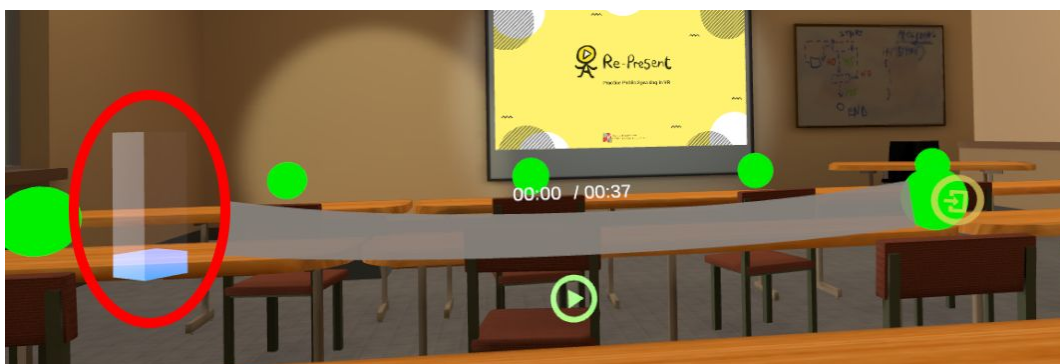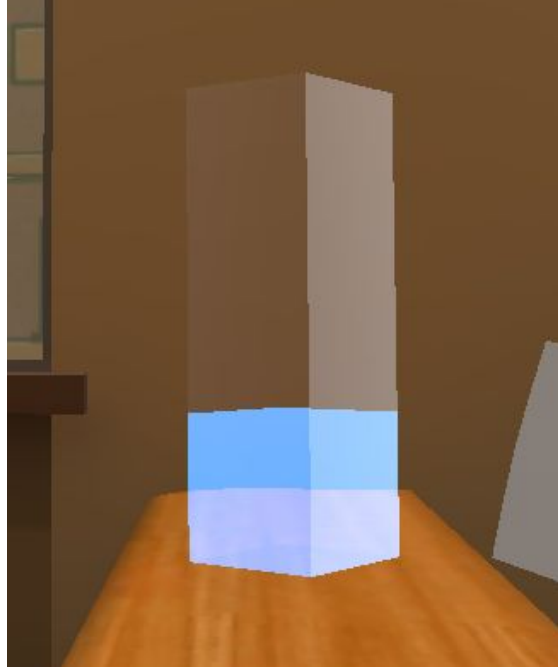
Figure 10.4 Volume bar

The bar is moving vertically based on your volume. (Figure 10.5, 10.6)
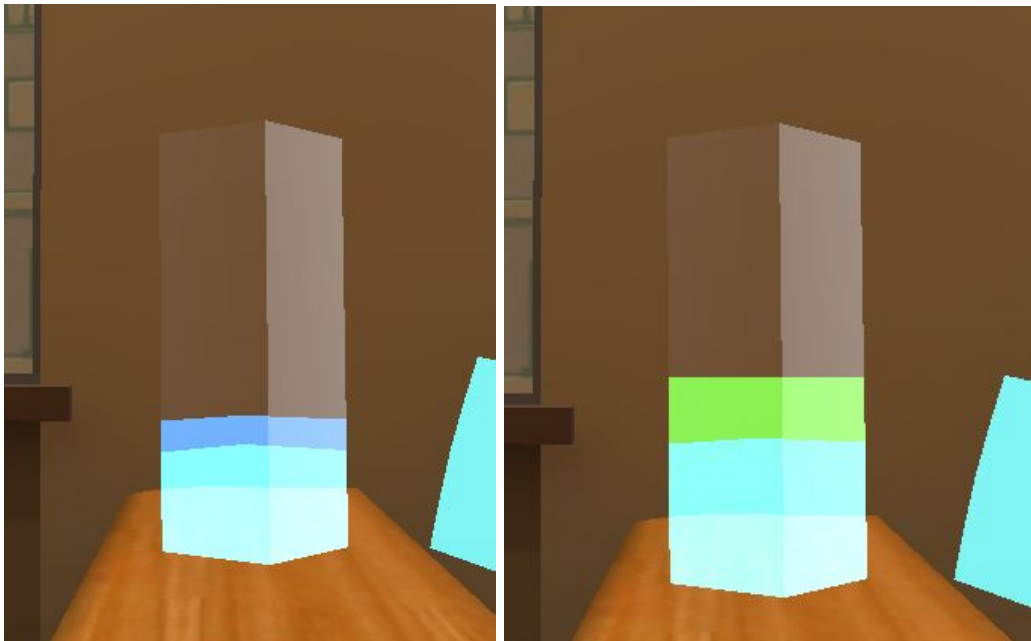
Figure 10.5, 10.6 Volume bar

Once you hit the play button, you will be able to see a wooden figure with a gaze cone attached to its head. (Figure 10.4, 10.5)
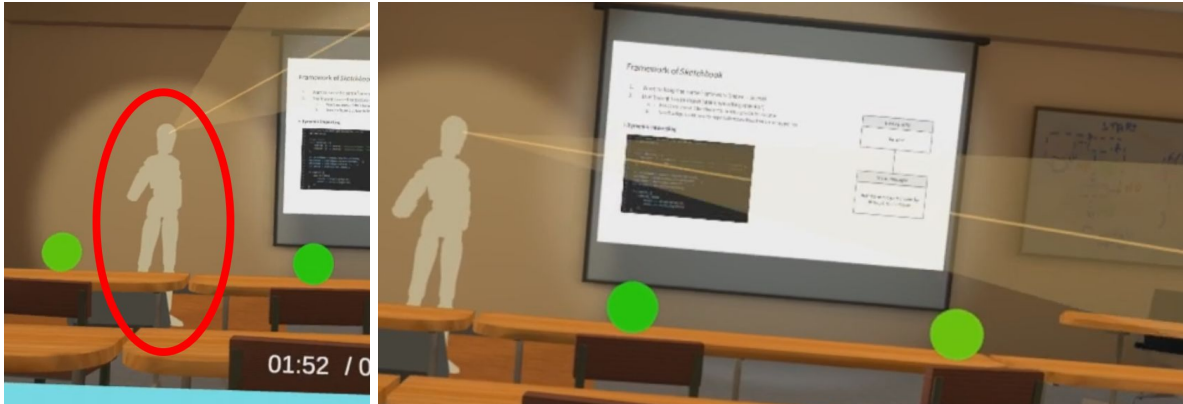
Figure 10.4, 10.5 Wooden figure

In the environment, you will be able to see floating balls that represent your eye contact level in real-time. (Figure 10.6, 10.7)
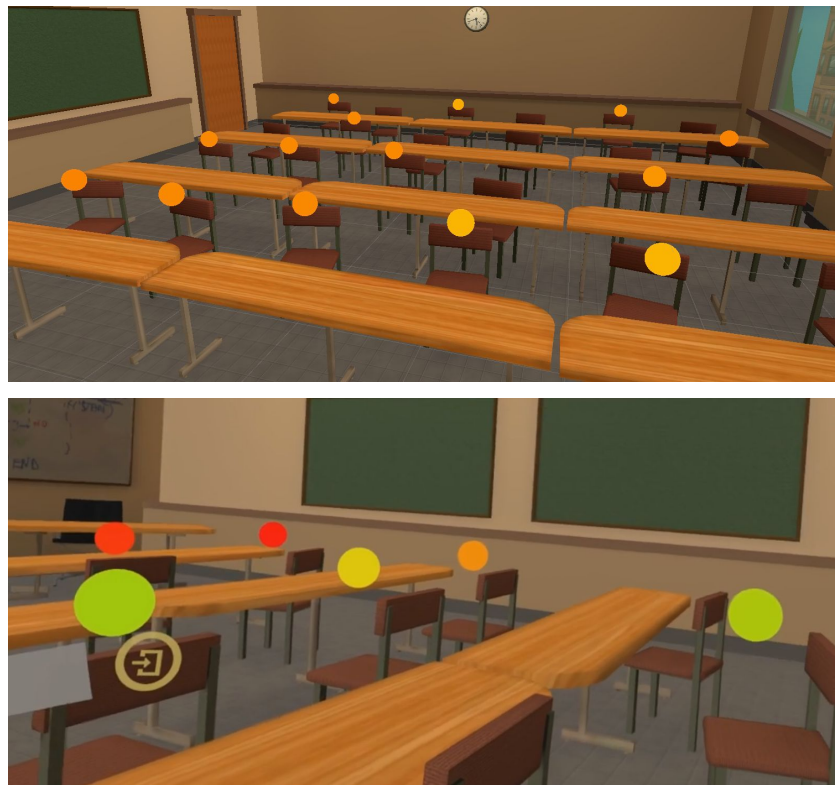
Figure 10.6, 10.7 UI balls for eye contact level

Once you are done with reviewing, you can exit the app by clicking on the Exit button on the right side of the timeline.

Step 12. Enter the Review mode from the Multi-session Review mode

If you have multiple session recorded, you can select one of the sessions from the Select mode page. (Figure 4.3)
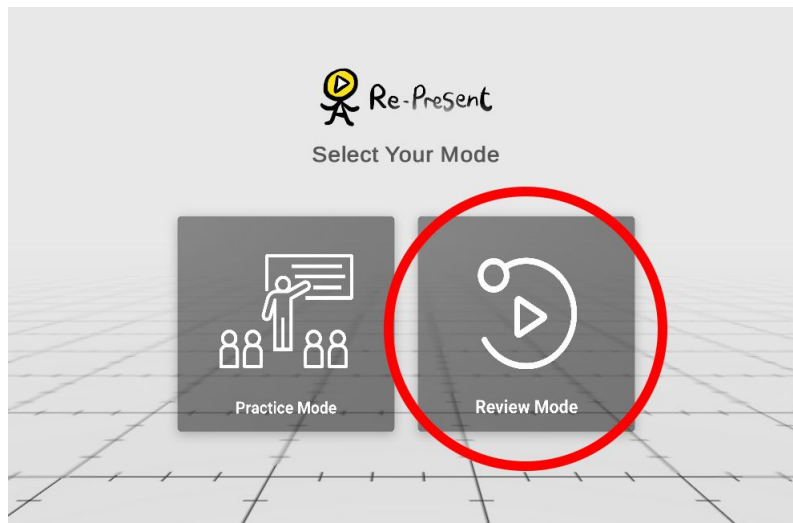
 You will see this following page. (Figure 11.1) Each thumbnail shows a session date with a first page of the pdf if you uploaded a pdf material for the session, otherwise it will show a default thumbnail. You can navigate between different pages by clicking the left/ right arrows on the side. If you want to exit from this page, you can click the exit button on the bottom.
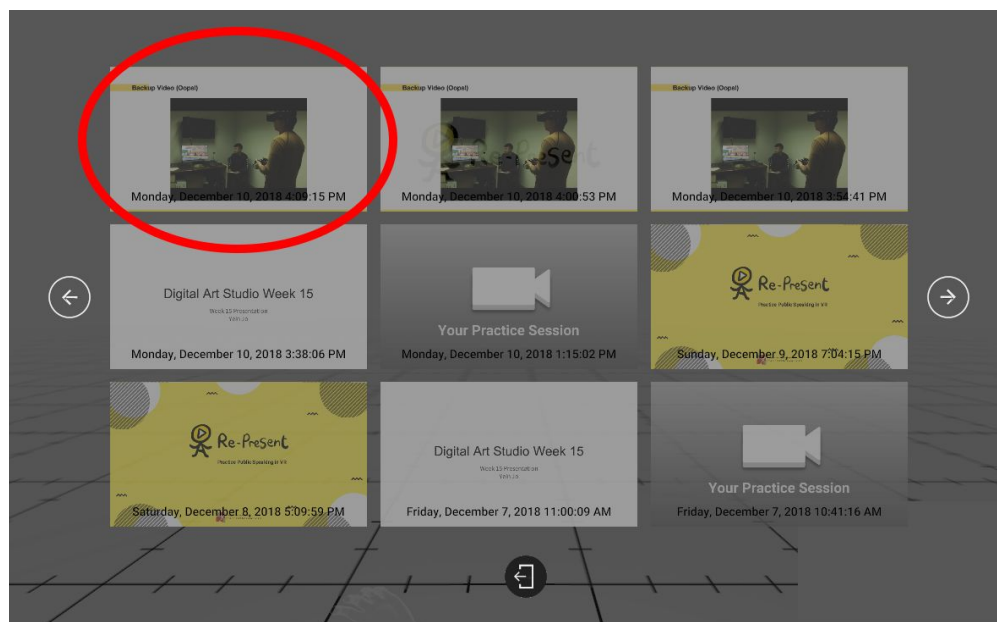
Figure 11.1 Multi-session summary page

Once you click on the one of the thumbnails, a window that shows the summary of the session will pop up. It will show the same summary that you have seen before. You can choose to start review by clicking on the play button on the bottom right, or close the pop up window that is on the left bottom.
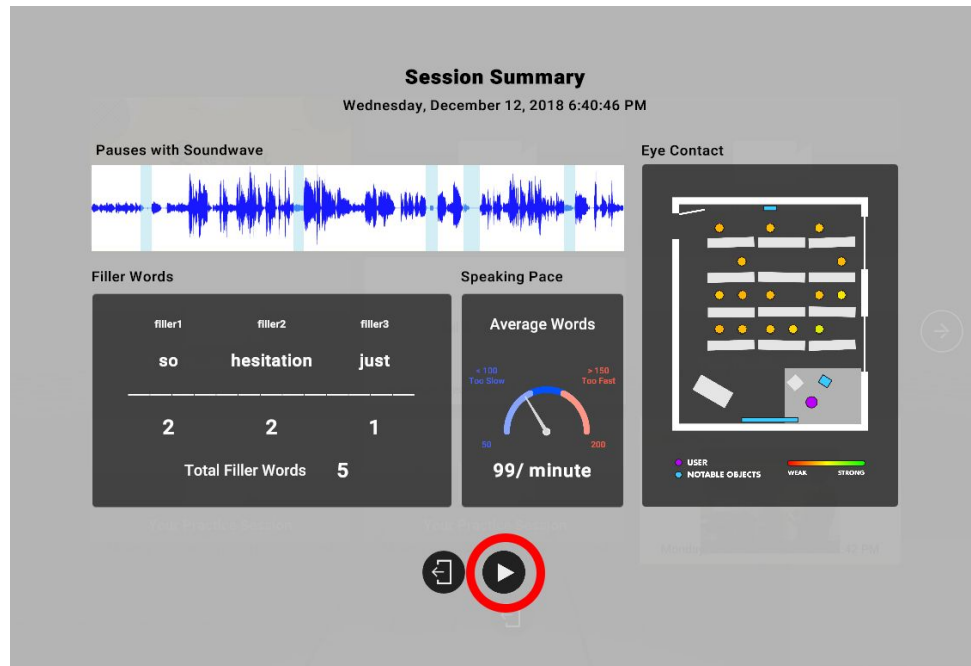

Figure 11.2 Summary page for one session

Once you hit the play button, it will bring you to the Review mode, and you will be able to enter the classroom setting. (Figure 10.1)

Data Checklist

When one session ends, you (TA) should check if the data is stored locally. Here is a structure how data is being stored. (Figure 11.1)
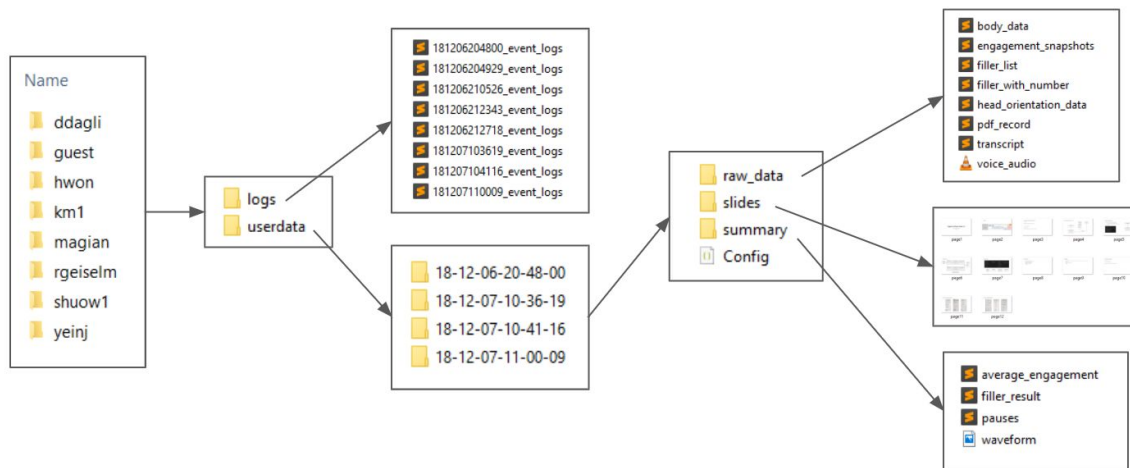
Figure 11.1 Data structure

Step 1. Click Users on the desktop

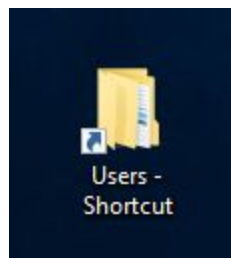There is a shortcut icon on the desktop (Figure 11.2) Click to access to the datasets.

Figure 11.2 Users folder

Step 2. Find the andrew id that you typed

Find the andrew id that you are looking for, and if you can't find it, check if you mistyped the andrew id. (Figure 11.3, 11.4)
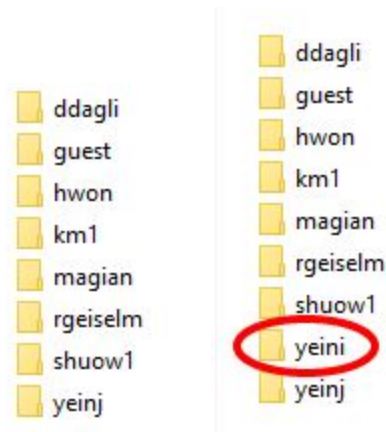
Figure 11.3, 11.4 Mistyped andrew id

If you find your andrew id, double click the folder and see if it has two sub-folders: logs and userdata (Figure 11.5)

Figure 11.5 Logs and userdata

Step 3. Check if the data is stored correctly

A. User action logs

First, click on the *logs* folder. There, you will be able to see the list of the log files. (Figure 11.6) Each file name is based on the session date, so find a log file that you are looking for. When you open one of the log files, you can see session date, andrew id, and the action log for each row. Ideally, the log starts with start app and ends with log out. (Figure 11.7)

Figure 11.6 Log files

Figure 11.7 log file example

B. User Data

Same fashion is applied to the userdata. Each folder is a different session and the name is based on the session date & time. You need to find the previous session. (or any session that you are looking for) (Figure 11.8)

Figure 11.8 session date list

Once you find the session, you will be able to see: raw_data, slides, summary, and Config. (Figure 11.9)
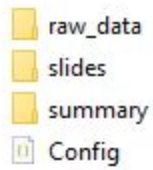
Figure 11.9

Inside the raw_data folder, check if **all the files** that are listed below (Figure 11.10) are existing.
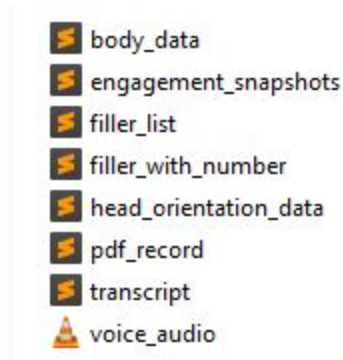

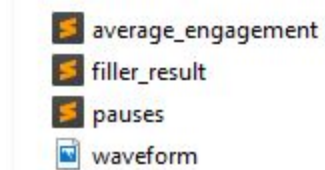*Figure 11.10 File list inside the raw_data folder*

Figure 11.11 File list inside the summary folder

If some data is missing in the summary, the session is still playable, but you may not see the summary result in the multi-session summary page (Figure 11.11, 11.12)

You don't need to check the slides folder unless you have uploaded a pdf material for the presentation. If you have the pdf uploaded, you should see a list of png files as images below. (Figure 11.12)
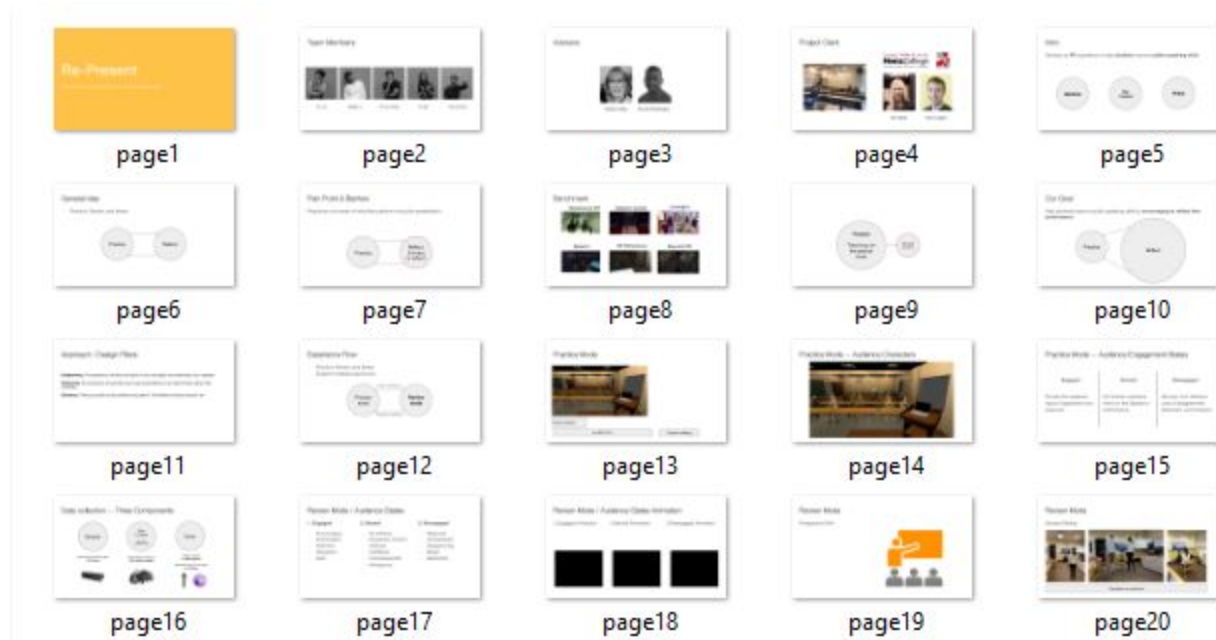Note: the images don't have to match those below as they are examples.

Figure 11.12 Example file list of the slides folder

If you face any technical issues that are not listed in the documentation, please contact us!
etcrepresent@gmail.com