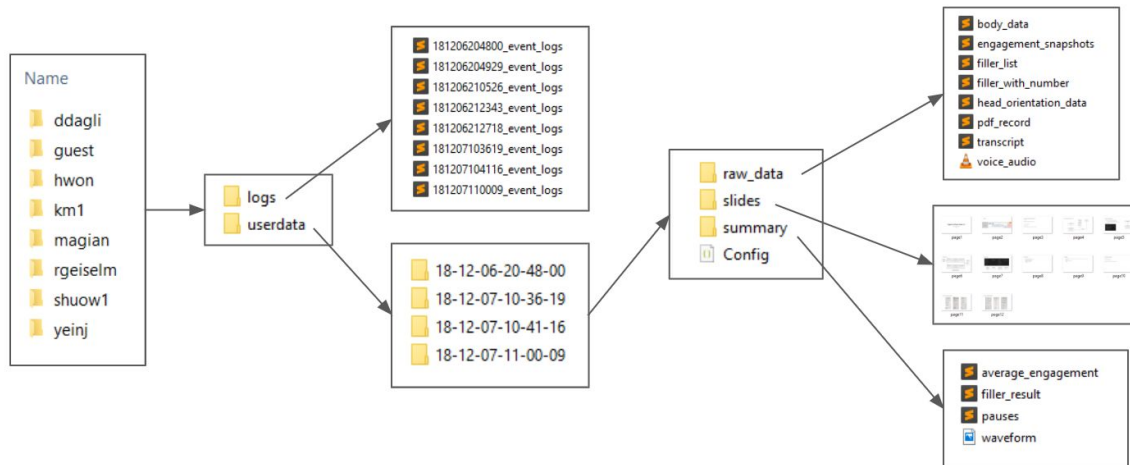


When log in, the system creates a folder with a username. Inside the username folder, there are two folders: **userdata** and **logs**.



1.Userdata:

Raw data

Body_data

body positional data that is used for replaying a user's body movement

The data is gathered by Kinect sensor. It contains positional and rotational data for each joint. The data is streamed and stored per frame

timestamp(unity time interval)	timestamp(100-nanosecond interval)
0.100 kb	5.02037E+16
0.120 kb	5.02037E+16
0.185 kb	5.02037E+16
0.219 kb	5.02037E+16
0.252 kb	5.02037E+16

The first two columns are **timestamps**: unity time interval(sec)/ system time interval(100 nano second)

body count	joint count
6	25

Next two columns are **body count** and **joint count**. These two are constant numbers, each 6 and 25. Kinect can capture 6 bodies in maximum; each body has 25 joints.

body1 tracked	body2 tracked	body3 tracked	body4 tracked	body id
0	0	0	1	7.2E+16

Since Kinect can detect 6 bodies, the next 1-6 columns are indicating if the bodies are tracked. If a body is tracked, it is 1, if not, it's 0. Based on which body is being tracked, the body id will be assigned next to the tracked body. In this case, body 4 is tracked, and the id gets appended to the next column.

joint tracking state(0-untracked, 1-inferred, 2-tracked)	joint position x	joint position y	joint position z
2	-0.208	-0.636	1.369
2	-0.213	-0.633	1.367
2	-0.214	-0.631	1.363
2	-0.214	-0.629	1.36
2	-0.211	-0.629	1.355

Once the body is being tracked, all the joint data is appended to the next columns. Each joint has 4 columns: **tracking state, position x, position y, and position z**

Tracking has three states: 0 means not tracked, 1 is not tracked yet Kinect is inferring, and 2 is tracked. Following three columns are for joint positional data.

2	-0.236	-0.022	1.395	2	-0.233	0.083	1.434	1	-0.388	-0.244	1.382	2	-0.404	-0.285	1.241	2	-0.265	-0.173	1.18	2	-0.216	-0.083	1.137
2	-0.248	0.018	1.379	2	-0.22	0.116	1.438	1	-0.396	-0.246	1.375	2	-0.384	-0.223	1.218	2	-0.233	-0.127	1.159	2	-0.221	-0.08	1.144
2	-0.245	0.014	1.379	2	-0.221	0.115	1.429	1	-0.394	-0.244	1.372	2	-0.385	-0.223	1.218	2	-0.266	-0.098	1.14	1	-0.238	-0.067	1.144
2	-0.244	0.012	1.378	2	-0.218	0.113	1.424	1	-0.393	-0.243	1.369	2	-0.386	-0.222	1.216	2	-0.266	-0.097	1.14	1	-0.236	-0.067	1.144
2	-0.226	-0.029	1.367	2	-0.222	0.085	1.419	1	-0.373	-0.223	1.362	2	-0.387	-0.221	1.211	2	-0.265	-0.097	1.139	1	-0.237	-0.066	1.143
2	-0.225	-0.028	1.366	2	-0.212	0.087	1.415	1	-0.373	-0.222	1.362	2	-0.386	-0.218	1.209	2	-0.281	-0.083	1.134	1	-0.255	-0.054	1.141
2	-0.224	-0.026	1.362	2	-0.204	0.087	1.406	1	-0.374	-0.221	1.36	2	-0.388	-0.216	1.206	2	-0.285	-0.08	1.134	1	-0.261	-0.048	1.137
2	-0.22	-0.037	1.354	2	-0.199	0.087	1.395	1	-0.374	-0.259	1.367	2	-0.389	-0.214	1.199	2	-0.287	-0.08	1.133	1	-0.268	-0.04	1.133
2	-0.22	-0.037	1.354	2	-0.193	0.086	1.384	1	-0.367	-0.216	1.342	2	-0.385	-0.212	1.195	2	-0.289	-0.074	1.132	1	-0.273	-0.031	1.131

4 columns is a set for one joint, and each joint has a same structure. The number of joint data columns is **100**, since the number of joints is 25 and each joint has 4 data sets. For example, the first 4 columns are **Spine base**, next is **Spine mid**, next is **Neck**, and it is continued. The entire joints are listed in here:

<https://docs.microsoft.com/en-us/previous-versions/windows/kinect/dn758662%28v%3dieb.10%29>

Engagement_snapshots

audience engagement level with their id and position per second

Based on the head orientation, each audience engagement level either increases or decreases. The range of the engagement level is from 0 to 1. The increasing rate is 0.08 and decreasing rate is 0.01 per second. There is a threshold time for decreasing, which is 8 seconds. (If a user doesn't look at a audience member more than 8 seconds, it starts to decrease. Once they look at the audience member, the threshold time refreshes.)

Voice_audio

a recorded wav file of the session

Voice is being recorded by a built-in microphone in the Oculus headset. It is saved as a wav file.

Transcript

voice transcription that is generated from Watson speech to text api

Once the practice session is done, the system retrieves a voice transcript from Watson by sending the wav file that is recorded by the microphone.

Filler_list

filler words with time interval

When sending a recorded voice file(.wav), the system also send a keyword set in order to filter filler words. Here is a list of filler words:

"like", "so", "well", "ok", "right", "i mean", "you know", "you see", "basically", "actually", "literally", "now", "stuff", "just", "say", "anyway", "anyways", "like i said", "something like that", "what i am trying to say is", "what i'm trying to say is", "what's the word", "i feel like", "what is the word", "how to say", "the thing is", "sort of", "kind of", "i guess", "i think", "oh yeah", "%HESITATION"

%HESITATION includes all the "um", "uh", and "ah".

The data is returned with the time interval(start time and end time).

Filler_with_number

filler words with total number

Same data set with total number.

Head_orientation_data

oculus headset orientation data

The system records the head orientation data from the Oculus headset. It is used for the user avatar head movement.

Pdf_record

pdf page index number per second

This data is a snapshot of pdf index pages and timestamps. It is used for replaying the slides.

[Slides](#)

pdf images that a user uploaded

If there is no slides, it will be an empty folder.

[Summary \(data that is used in the summary page\)](#)

Average_engagement

average engagement level for each audience member of the entire session

The system averages the engagement level snapshots and returns one list of average value with audience id.

Filler_result

total number of filler words, average word per minute, and filler words that is sorted in a descending order (from the most to the least) with numbers

Pauses

longest 5 pauses with time interval

When the audio is uploaded in Unity, it converts amplitude samples into the spectrum of -0.5 to +0.5. Amplitude is higher when the absolute value of the sample is larger. The system captures the samples that are between -0.02 to +0.02.

Waveform

voice waveform of the entire session

2.Logs:

User action logs with user id and timestamp

Action log list

- Start app
- Login
- Import pdf
- Click on one of the thumbnails in the multi-session summary page
- Enter practice session
- Start presentation in the practice session (Since there is a restart feature, it will show the index of the practice sessions as well)
- End practice session
- Enter review session
- Switch to the previous slide
- Switch to the next slide
- Start play-back in the review session
- Pause on the timeline in the review session
- Scrub on the timeline in the review session

- Exit app