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| Names: George, Matt, David |  |  |
| SD: Kinect Project |  |  |
| Story | Risk | Est Time |
| Track hand movement | 3 | 3 hours |
| Recognize hand gestures | 5 | 2 months |
| Notification of gestures being targeted | 2 | 2 hours |
| Interact with devices by cutting out audio and/or video | 2 | 2 days |
| Enhance notification with images, voice commands and count down progress bar. | 2 | 1 day |
| Store data about intencies of picked up gestures on a secure, authenticity required server. | 3 | 3 days |
| Enhanced machine learning to pick up gestures | 4 | 1 month |
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Track hand movement:

Basic premises of the project is to track hand movements.

Recognize hand gestures:

As expected, gesture recognizing is one of the most risky elements of the project. This is due in large part of the unexpected nature of the targeted subjects. There is an expected amount of false positive error when dealing with hand gestures when programming the project using the Kinect’s machine learning prospect. Since the subjects are unpredictable, programming gestures can produce many false positives. Due to the fact that the captured gesture may have an infinite amount of different angles, ranges, and positions.

In order to devise the most accurate results when dealing with gestures is to have a hybrid system; part machine learning and part heuristics. By teaching the Kinect’s machine learning with large amount of recorded gestures, we can utilize the returned confidence level to determine the action that needs to be conducted. These confidence levels should be tracked and only take action on a decided threshold that the developers set beforehand.

Heuristics should have a profound effect on detecting the outliers that wasn’t registered with the machine learning element of the Kinect. Because we can’t program the kinect with every single type of stereography motion, we can develop a system that tracks large range of suspicious activities. This is also devised around a confidence variable that requires a higher threshold than that of the machine learning element. Because we want to be sure that these outliers are not just the Kinect having issue’s tracking a skeleton facing the camera.

Notification of gestures being targeted:

Once that threshold that was devised by the developers, the next portion to be bring up a notification element into the picture. Simple popup or message to signal that a gesture is being detected at the moment.

Interact with devices by cutting out audio and/or video:

At this point the gesture has triggered events that requires device action. This part of the program is going to require a method to block out the video, by blacking out the entire screen and have an option to be set to have the audio muted.

Enhance notification with images, voice commands and count down progress bar:

Instead of just having a blank black screen, add “Quite Hands” image options and or audio clips saying the words “Quite Hands” to the user of the detected stereotophy.

Store data about intencies of picked up gestures on a secure, authenticity required server:

Have a place where the client who is using the program and look up statistical data picked up from the program. This access portal must have security at the forefront, as it deals with real human data that could affect or even harm the individual if some of the data that is tracked gets leaked out.

Enhanced machine learning to pick up gestures:

Because of the possible level of error during the first initial releases, better algorithms may need to assist or replace some existing implementations of gesture recognition.