

NUI Using Microsoft's Kinect Sensor

Statement of the Problem

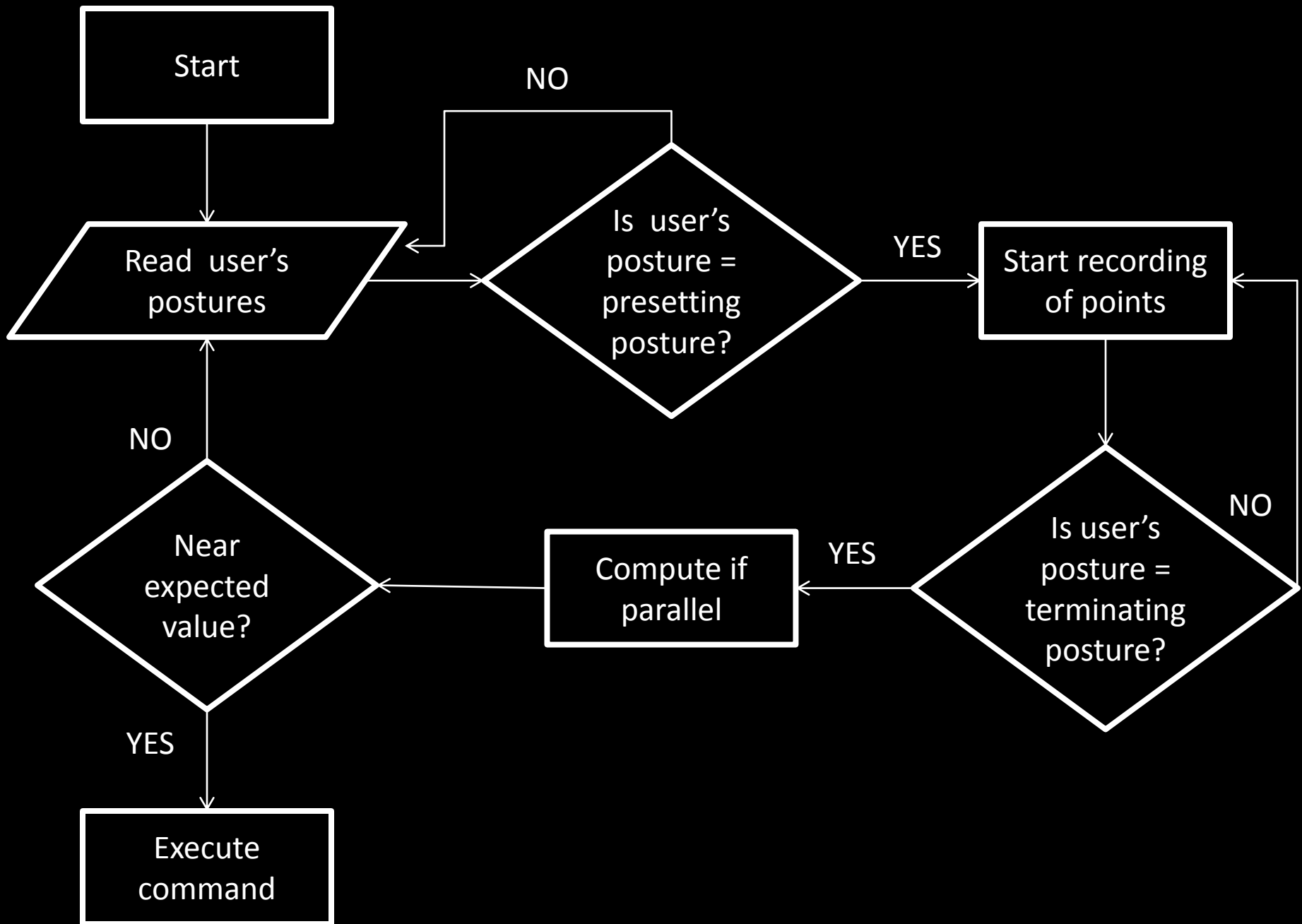
The improper use of the keyboard and the mouse has drawbacks.

- It also limits the user from using the computer if the user's hands are dirty or they are too far from the computer.
- It may cause repetitive stress injuries (RSI) .

Objectives

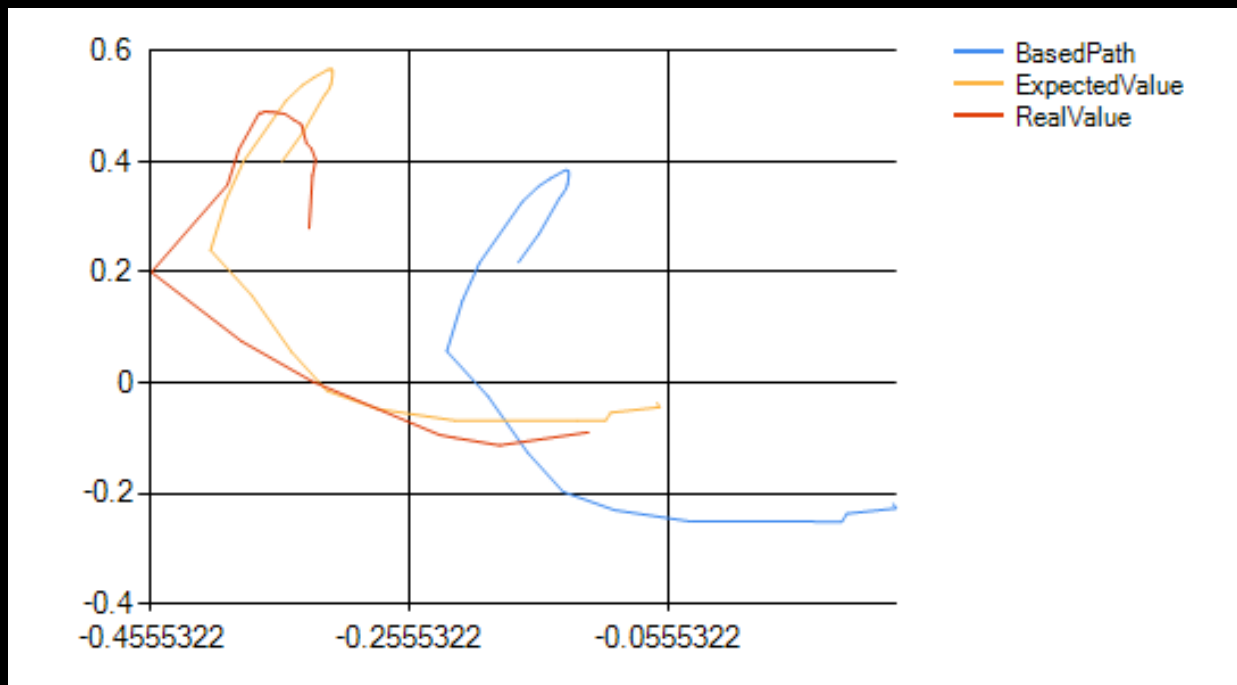
- To make a gesture and posture detector using Kinect;
- To come up with suitable gestures for some computer commands like Close Program, Open Program
- To be able to move the mouse pointer using hand movements
- To develop own version of gesture commands for powerpoint presentations
- To create a virtual keyboard that will suite a NUI Environment.

Methodology



Results and Discussion

Based on the following graphs the expected values were near to the real values. The algorithm used was effective in checking whether the newly recorded gestures were parallel to the reference gesture.



Conclusion

The NUI was able to execute some computer commands using gestures. It was also able to simulate some mouse events like press left mouse button and press right mouse button, and virtual keyboard. The algorithm used in comparing similar gestures was able to check the parallelism of the reference gesture to the newly recorded gesture.