

Leap Motion Gesture Recognition And Rock-paper-scissors game

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1. Platform and Implementation

The implementation will use Leap Motion JDK and provided gesture api to extract gesture. This implementation will mainly consist of three part:

First use the leap motion api to get basic gesture recognition, then define an algorithm to extract gesture sequence, finally associate this gesture sequence with one of three shapes (one of Rock-paper-scissors).

Second consists of Building a UI for the game:

- 1) gesture to start a new game.
- 2) record two players (or one player against a computer) hand shape and compute who is winner.
- 3) Visualize the hand shapes and record scores.

Third run the algorithm under the Developer's SIS testbed to select and fine-tune its algorithm.

2. Deliverables:

- Milestone 2

Finish the part of using the leap motion api to get basic gesture recognition, then define an algorithm to extract gesture sequence, finally associate this gesture sequence with one of three shapes. (recognizing one hand shape)

- Project Demo

Finish UI part and run the algorithm under the Developer's SIS testbed to select and fine-tune its algorithm. (Recognizing two hand shapes).

In project demo I will show a game that a human against computer and a two human competing again. Besides, I will use the Developer's SIS testbed to verify the algorithm.

- Plan B

I will first start will recognizing one hand, finally with recognizing two hands. If two hands to be too hard to realize. Plan B will be realize a human against computer game.