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2. Course Number : CS-492

3. Course Title : Kinect Programming

4. Work Number : PR-05

5. Work Name : Kinect Project Progress Report

6. Work Version : Version 1

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Kinect Project Progress Report

Project Assumptions:

- This project will only work with one user.

- The user must be facing the Kinect. This is because of the technique being used for recognizing gestures and can be improved by using the Rotation Matrices that are given from the SimpleOpenNI's getJointOrientation() method.

Completed:

- Songs can be generated using a Markov Chain.

- Whole entire songs can be generated with respect to the compatible emotions.

- Whole songs can be saved as midi files using the old music library (SoundCipher.)

- Generated songs can now be stopped and played using jm-etude – a new music library for this project (http://jmetude.dihardja.de/).

- The pose recognition system has been integrated so that it can trigger songs to be played.

- Rules have been added to the pose recognition system for the compatible emotions: happy and sad.

In Progress:

- Adding to the rules for the pose recognition system for the current emotions and some more emotions.

To do:

- Adding in Markov Chain data for new emotions. (very important)

- Making it so that the generated songs for each emotion change over time. Basically making it so that every so often new generated songs will be played instead of just playing the same songs over and over again. (I hate not being able to pause the song with the music library, jm-etude. So each time an emotion changes, the next song starts from the very beginning. It just gets too repetitive for me.)

- Adding another instrument to the generated music. One that follows the same key and scale as the first, which will hopefully be enough to help them from clashing with each other.

- Adding in a Markov Chain for the note durations of the generated song. This would require less data than the other chain because there are less durations than pitches possible.

- Adding in compatibility for more emotions.