Abstract:

We plan on designing a program that recognizes specific motions using our motion capture equipment. Ideally we will have a database of captures and the program will be able to recognize new captures that are closely related to the ones that are stored. Our equipment is a prosthetic motion-capture hardware called Perception Neuron. It is relatively new and there is currently small amount of developers working on it. Since the hardware is prosthetic, it is very adaptive and responsive and working on a movement recognition program will be beneficial to other developers that want to work with this equipment. Having an implementation that can recognize movements will help improve on future implementation that can be incorporated with software, virtual reality, games, and other applications of the Perception Neuron Equipment.

Work plan:

Tasks:

1. Record the motion using the mocap device. Export it as bvh (or fbx) files.

2. Sort the data in the library to make its analyzing faster(Optional)

3. Analyze the data and compare the recorded motion to a library of motions.

4. Find a similar motion in the library.