Emily Park

Deliverable 1

I chose to do the gesture recognition project, and I was thinking of making a rock-scissors-papers game with it. So there would be three distinct gestures to recognize (rock, scissors, papers) but there are also variations to consider. For example, whether the palm is facing the camera or away from it, and ‘scissors’ can have two versions: thumb and index out, and index and middle out. But the number of fingers is the same for each variation, ie. a thumb has no finger out, scissors has two, and papers has all five.

I would have to use convex hull to find out the hand shape. I think that’s the best way because it would be easy to identify certain ‘points’ of the hand, like the fingertips. And since the thumb is located lower than the other fingers, it would be easy to find out which fingers are extended.

I found several hand images through Google (from websites that have anatomy reference photos for artists, American Sign Language websites, and stock images). There are about 80 photos so far. Some of the photos have all three gestures or have two players demonstrating in one image, but they can be cropped into separate images in the future if necessary. They all have monotone background, so it should be easy to extract just the hands. They’re all in one folder right now, but I could separate them into folders for each gesture if needed.