

## CS5789/Art4455: Kinetic Art and Embedded Systems

### Individual Project #3: Arduino/Servo/Sensor

For this assignment you should design, build, and demo a small kinetic art piece that involves Arduino control, at least one sensor for input, and at least one servo for movement.

**Sensor:** You can use any environmental sensor you like, as long as it's easily connected to the Arduino. In practice this typically means some sort of resistive sensor connected to the analog inputs. Sensors that we have that you can use include:

- Cds light sensors
- PIR movement sensors (Passive Infra-Red)
- Infrared distance sensors (in at least a couple ranges)
- Thermistors (temperature sensors)
- Piezo vibration sensors

**Movement:** For the movement aspect of your project, you should use at least one servo. We have both tiny and standard sized servos. You should use the "servo" library from Arduino to make the servo move. Note that if you use up to two standard servos or three tiny servos, you can power everything from the Arduino. If you use more than that, you will likely have to use a separate power supply for the servos. We'll talk about that in class.

You can use any other physical media that you like to construct your piece. That is, wood, metal, plastic, cardboard, foamcore, etc. are all fair game. You should be able to demo your piece to the class, and also talk about why your piece is doing what it's doing, or why it's reacting the way it's reacting. That is, in addition to the "what" and the "how" (i.e. the demo), we're also interested in the "why."

You should also be planning and sketching ideas in your sketchbook while you're developing your project. We'd like to see those sketches on demo day.