

CS5789/Art4455: Kinetic Art and Embedded Systems

Group Project #1: Paper with Embedded LEDs

This is a group assignment – we'll figure out how to form groups in class.

For this assignment you'll embed LEDs into handmade paper with some artistic/sculptural effect. You may want to use an 8x8 array of LEDs controlled by a Max7219 controller and connected to an Arduino. You may want to arrange these as a matrix and program patterns into that matrix, or you may want to spread the LEDs more widely across the paper and make different shapes. You may want to make multiple small pieces of paper with LEDs and smaller controllers, and then assemble the paper into a more sculptural piece. Or you may have other ideas.

The main activity is to explore how LEDs and handmade paper combine to be an interesting material for sculptural exploration. If we end up with multiple large sheets with embedded arrays of LEDs making patterns - that will look great on the wall. If we end up with a set of more 3d sculptural pieces that also involve the physicality of paper combined with embedded LEDs that will be great too.

We have 3000 tiny red LEDs at our disposal, and lots of very thin wire. If you'd like to explore different materials, let us know. You also have many different paper materials that you can explore.

As always, keep records of your thought process, prototypes, etc. in your sketchbooks. During your design phase keep in mind that you'll need to power the LEDs at least, if not also control them from an Arduino or a pSoC.