Motion control LED

I propose to make a sensor glove that can turn on different LED lights with certain movements. Then if possible make a fake hand that can connect the Different LED on them. So when I move my sensor glove the fake hand will also move.

Summary

An interactive glove that lets you turn on or turn off different LED's. The glove will have five flex sensors attached to each finger of the glove. The flex sensor will keep track of when the fingers are at more than 90 degrees or at a complete 180 angle. When the finger/ fingers is at a 90 degree or more angle the LEDs will turn off. Then when the finger/fingers are at a 180 degree angle the LEDs will turn back on. Each finger on the glove that is connected to a sensor will control a different color LED.

Once the flex sensor are able to control the LEDs to turn on and off i will start to move on to the second part of my project. I will make a fake hand that bends just like a real hand. Once that is working fine i will connect the flex sensors glove to the fake hand so that when i move the glove the fake hand also moves. Then the finally step is to connect the different colors LED to the fake hand.

The point to all of this is to just make a cool light show that can be fun to see in the dark and when the lights are on.
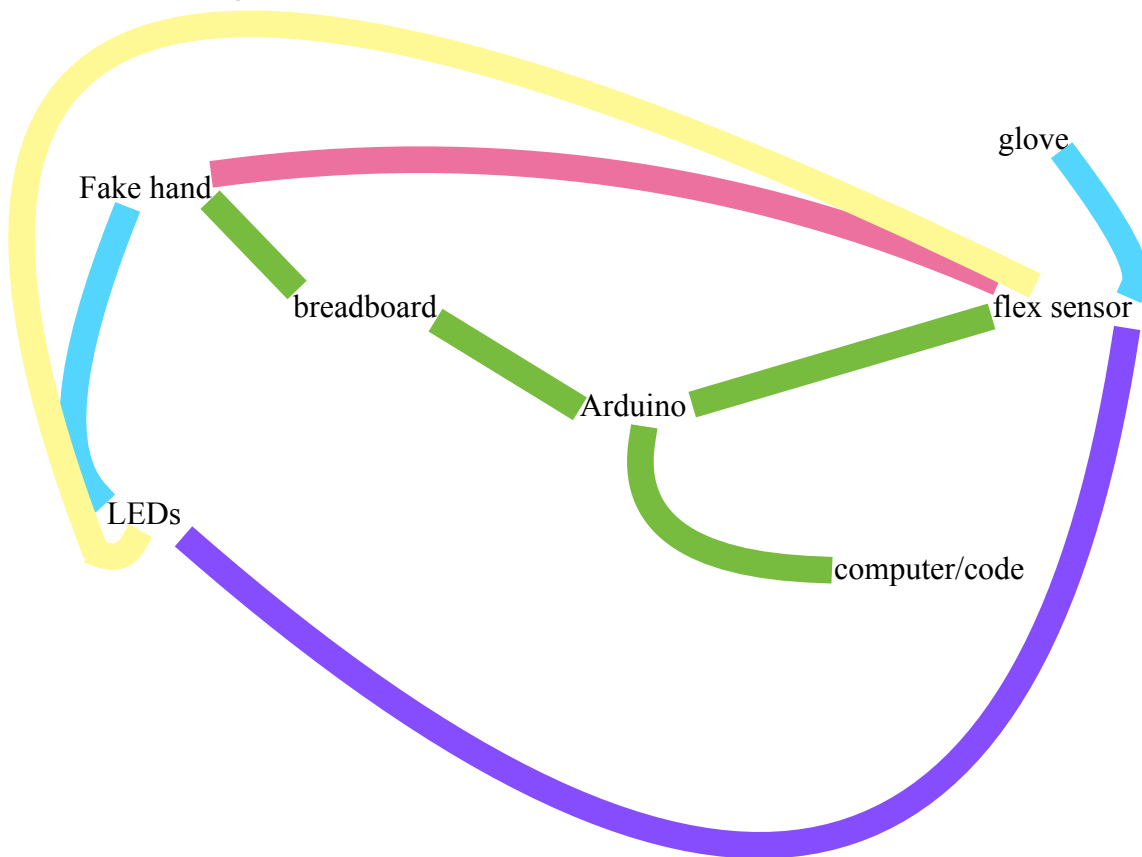
Components parts

 On the hardware side

- ❏ LEDs
- ❏ Flex sensors

- ❏ Styrofoam

- ❏ Servo motor

- ❏ Glove

- ❏ wires

On the software side

- ❏ Arduino

- ❏ Computer

- ❏ Breadboard

- ❏ Code

Block diagram

glove

Fake hand

breadboard

Arduino

flex sensor

computer/code

LEDs

Challenges

The most challenging part for me is getting the right code that will turn the LED off and on. I

don't have a clue where to being in making this aspect of my project work.

The next challenge is making sure the flex sensors are connected to the LEDS and the fake hand.

I never work with this type of material before so i'am just guessing that it can do the job.

Also the wiring that goes to the glove to the fake hand will be a little tricky.

Timeline

Week 1: Write proposal, make sure i know all the materials i will need to make this work,

and start to order the materials.

Week 2: start to make my fake hand so that it can move like a real one, add the flex sensors to

the glove, and lay out where the LEDs and wires will go.

Week 3: make a code that will turn the on and off the LEDs, connect the mores so that the fake

hand can move, and connect the flex sensors glove to the LEDs and the fake hand.

Week 4: test out the project to make sure everything works and fix any problem that might have

camen up.

Week 5: present the project.