LED Prom Dress

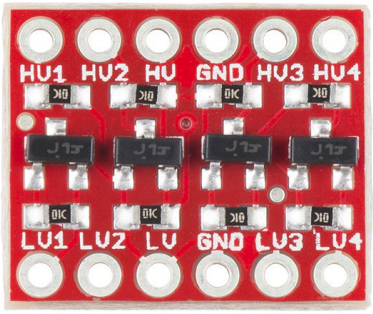
Description:

I believe that my Capstone is unique because I do not know of a person in this Graduating class of 2017 that is planning on having a prom dress with LEDs on and will *actually* follow through with wearing it to prom.

Materials:

Arduino, C, solder, soldering iron, Wire, wire strippers, snips,
RGB LEDs- https://www.adafruit.com/product/1138 [Below]

$24.95 60; 120 needed; $49.90 for 120; About 54.90 including shipping,
hot glue gun, hot glue, needle, thread, velcro, breadboard,
3.3V to 5V logic converter - https://www.sparkfun.com/products/12009 [below]



2.95$ each; 1 needed; About 7.95 with shipping;

Prom Dress: Dress Type: JJ'sHouse Ball-Gown Sweetheart Floor-Length Tulle Prom Dress With Beading $176.98 without shipping. About $190 with shipping and tax.
(basically layered so it's easier to put LEDs on) [Left]

The milestones below are all in one week intervals:

Example: Milestone 1 starts Monday January 30th 2017, Milestone 2 starts February 6th 2017, etc.

Milestones:

Milestone 1: draw out the plan for the dress
Milestone 2: acquire the dress
Milestone 3: acquire the materials to put on LEDs to dress
Milestone 4: start on the LED circuit
Milestone 5: create the basic one LED circuit on the bread board
Milestone 6: draw the schematic for the full circuit based on the breadboard model
Milestone 7: solder the LEDs together to create the actual Circuit
Milestone 8: put the circuit on the dress
Milestone 9: continue 8
Milestone 10: finish the LED adding, and begin to program the LEDs for red and white fade
Milestone 11: collect the centripetal force data from my spin
Milestone 12: pseudo code the spin program for LEDs.
Milestone 13: program the LEDs to change colors as I spin; implementing the centripetal force data
Milestone 14: create the bow to hide the arduino and breadboard
Milestone 15: prom is here so dress should be finished enough for me to wear and last minute panic is going to be happening
Milestone 16: pseudo code a program for a rainbow fade
Milestone 17: program the rainbow fade
Milestone 18: pseudo code a program that fades through the rainbow backwards
Milestone 19: program the backwards rainbow fade
Milestone 20: prepare for the show case with a description of project and final system checks [similar to below, only there will be LEDs on the seams]