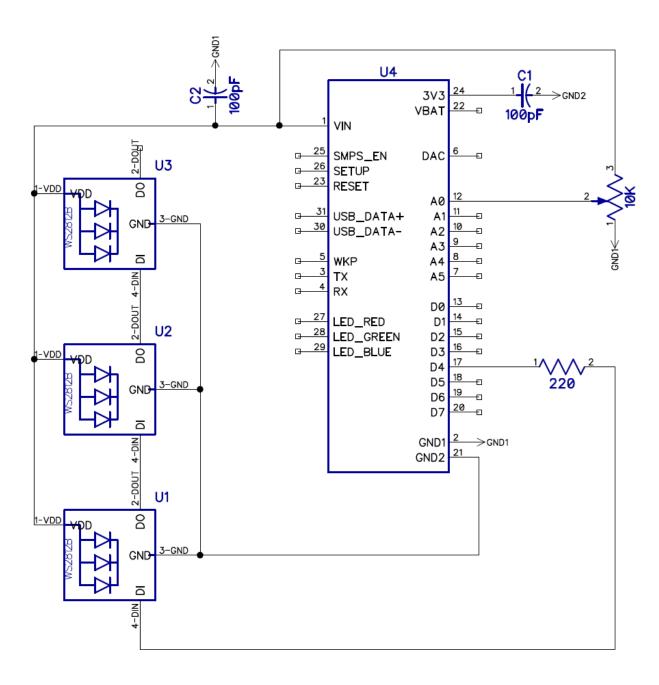
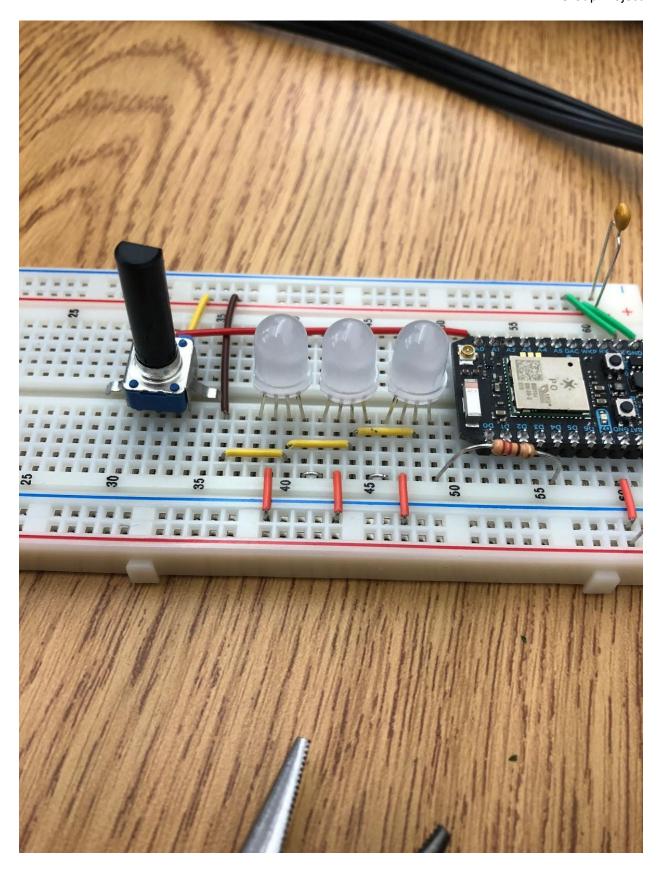
- 1. We were able to modify the project from one of this lab's exercises to include a potentiometer, so there wasn't much to change and it worked the first time we hooked it up. We coded the photon to move the position of a single red LED among the three LED's on the board based on the position of the potentiometer. When the potentiometer was turned all the way counterclockwise, the left LED was red. When the potentiometer was in the middle, the center LED was red, and when the potentiometer was at its maximum value the right LED was red. The LED's that were not red were coded to be blue. The issues that we ran into were with the potentiometer staying in place on the breadboard, otherwise we had the coding and circuits experience to put this together rather quickly without errors.
- 2. Unfortunately, the ADC values were lost because the edited PDF did not save properly. They were checked off by the TA before we moved on to our project, if that is worth anything.

```
//Paul Warmuth and Austen Lambert
//EE1301F18 IOT Lab 2
// This #include statement was automatically added by the Particle IDE.
#include <neopixel.h>
// IMPORTANT: Set pixel COUNT, PIN and TYPE
#define PIXEL PIN D4
#define PIXEL COUNT 3
#define PIXEL TYPE WS2811
#define AN MAX 4095
Adafruit NeoPixel strip = Adafruit NeoPixel (PIXEL COUNT, PIXEL PIN,
PIXEL TYPE);
void setup() {
strip.begin();
//this function enables selected led with the color colorselected, and
enables the non-selected LED's with the colorUnselected
void oneLight(int led, int colorSelected, int colorUnselected) {
    if(led > PIXEL COUNT)
    {
            return;
    for(int i = 0; i<PIXEL COUNT; i++)</pre>
            strip.setPixelColor(i, colorUnselected);
    strip.setPixelColor(led, colorSelected);
    strip.show();
}
void loop() {
//Setup some colors
int PixelColorRed = strip.Color( 80, 0, 4);
int PixelColorBlue = strip.Color( 0, 0, 128);
int targLED;
int step = AN MAX/PIXEL COUNT; //added to make this more general for any
number of lights.
int potentiometerVoltage = analogRead(A0); //reading the voltage off the
potentiometer.
//steps through and selects the target LED based upon the potentiometer
voltage
for(int i = 0; i<PIXEL COUNT; i++)</pre>
    if(step*i <= potentiometerVoltage && potentiometerVoltage <= (i+1)*step)</pre>
    {
            targLED = i;
//Enables the LED selected by the preceeding for() loop.
oneLight(targLED, PixelColorRed, PixelColorBlue);
delay(100); //wait 0.1sec}
```





Paul Warmuth EE1301F18 IOT LAB 2

