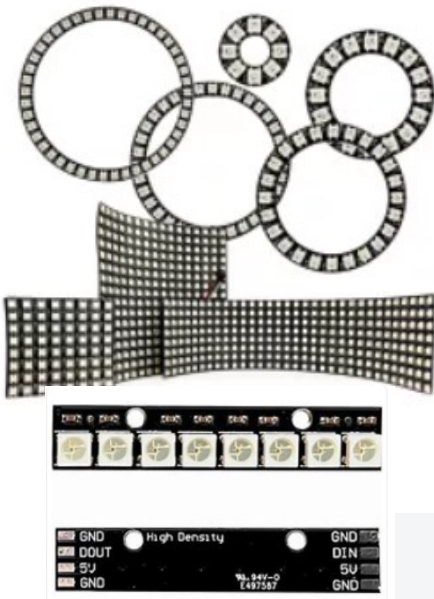


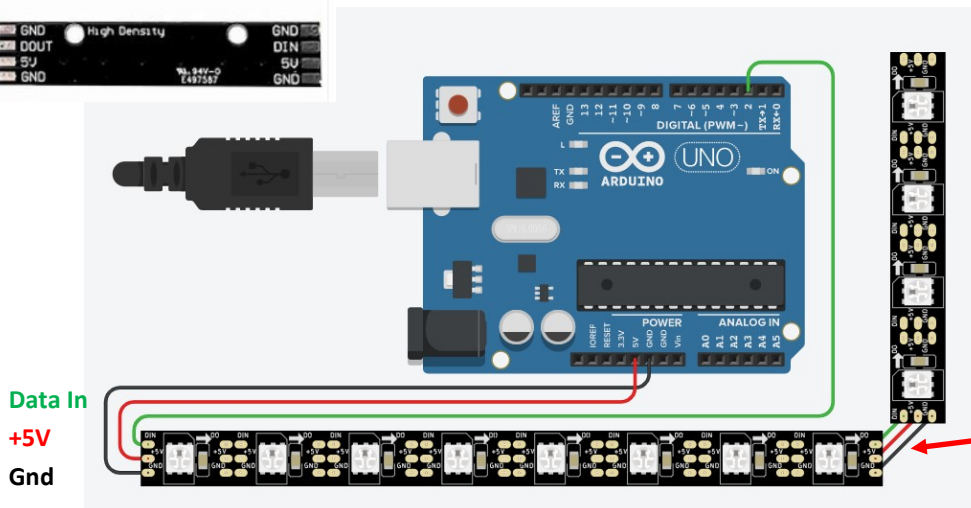
How to Build, Connect and Code your Neo Pixel (WS 2812) LED, to run from your Arduino Uno.

Pat McMahon—V1—24/7/2022



The Neo Pixel (WS2812) RGB LED strip is a strip of LEDs that the colour and brightness of each LED on the strip can be controlled individually. Each LED has its own embedded controllable microchip. They come in rings, sticks, strips, matrices, bendable and more. From just a single pin you can control many LEDs.

They do have some limitations. You need to be careful when using RGB LEDs because they draw so much power. If you try to power too many from the 5V pin of your microcontroller, you will most probably fry the board. Use a separate 5V power supply that can handle the total current draw. If using a separate power source for +5V & Gnd, ensure you also connect a common ground to your microcontroller Gnd from the power source Gnd, for it to work.



Neo Pixel LED's have a +5V, Gnd and a Data In or DI. They also have a Data Out or DO to connect to another strip, if daisy chaining.

You can find many examples, explanations and Codes on the Internet when you search, Neo Pixel LED's. One example is the Arduino Project Hub where you will find many great user examples.

For a quick connection to Code, go to patsrobots or patsrobots.com then go to the A061 thumbnail,

Select Code, Enable Editing, Copy & Paste it, using the Arduino IDE (Integrated Development Environment), to create your own Sketch, then Upload.

Pat's Sketch is for a 16 Bit Neo Pixel at a 200 millisecond delay. You will need to change the value to suite the number of Neo Pixels you have and the speed or the delay you want.

Experiment and have fun!

