Long term dust monitoring using GP2Y1014AU0F and Blynk

Monitor the surrounding dust and large particle (>0.5µm) for long time using Blynk IOT and plot the data for further research.

Hardware components

	Arduino UNO	× 1
	Espressif ESP8266 ESP-01	× 1
	SHARP GP2Y1014AU0F Dust Sensor	× 1

Software apps and online services

	Arduino IDE

Hand tools and fabrication machines

	Breadboard, 270 Pin
	Soldering iron (generic)

Sharp gp2y1014au0f is a particulate sensor uses an IR LED and when the particle in the air enters into the sensor the light bounce off towards a photo-detector. This technique is called **laser scattering**. The intensity of the scattered(Bounced) light depends on the dust particles. The more the dust particle the grater the bouncing or scattering happens. This intensity change of light on the photo detector changes the output voltage of the sensor. And we can read the output voltage and measure the dust density on the air.

Sensor kit:

- 1x GP2Y1014AU0F sensor
- 1 x 6-pin pig-tail cable for interfacing with the sensor easily
- 1 x 150 ohm resistor
- 1 x 220uF capacitor

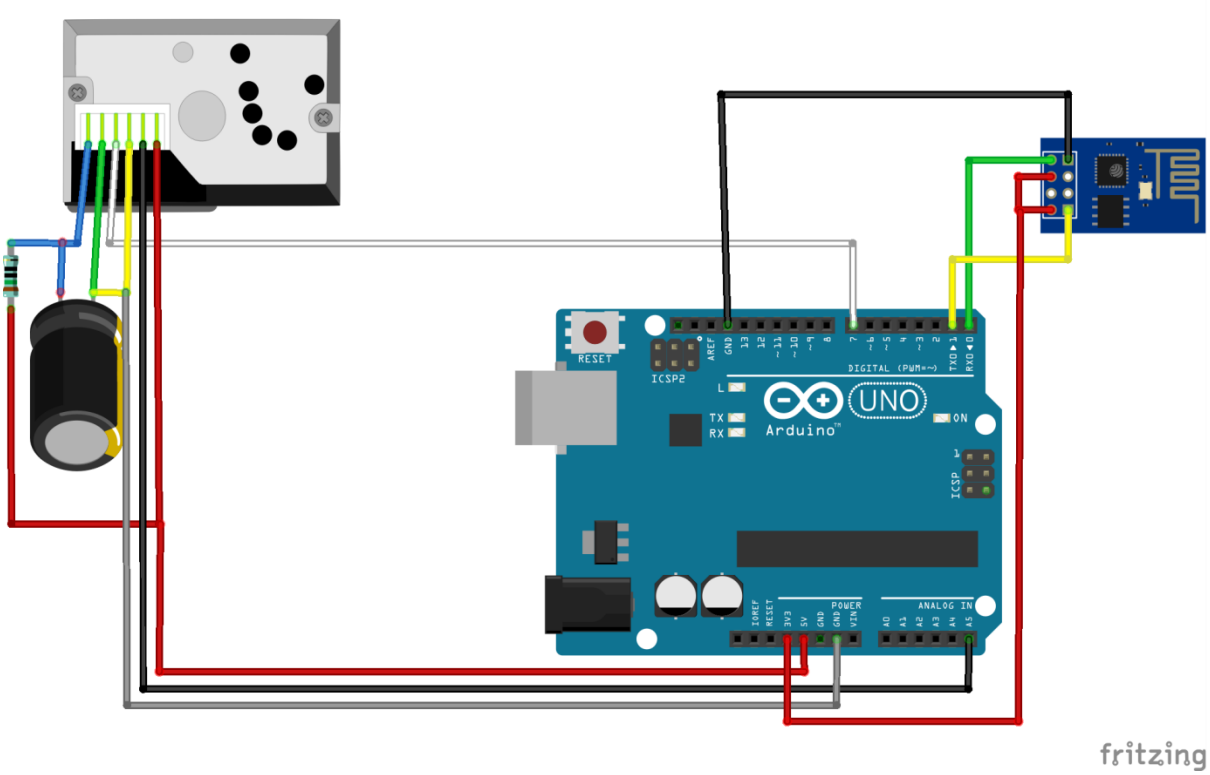

Figure 1 :SENSOR

Improvements:

1. It shall be able to approximate diameter of the dust particles. This will help us to know what preventives should be taken for different type of dust particles.

2. It shall project on screen along with data regarding size its ill effect on human body relating to hazards causing its prolong exposure.