



NOTI
by linzi wu



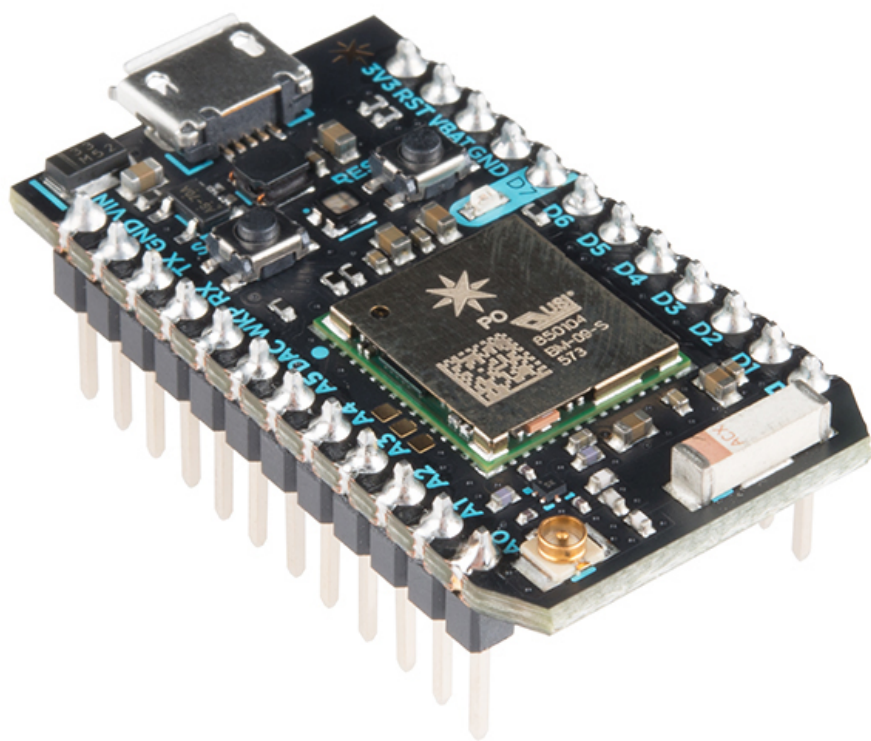


NOTI is a smart device that helps the user to filter information based on his/her focus level. The focus levels are represented by three different balls with different weights.

WHAT I DID

SOFTWARE

HAREWARE



photon particle

```
/* ===== includes ===== */
#include "application.h"
#include "neopixel/neopixel.h" // use for Build IDE
// #include "neopixel.h" // use for local build

/* ===== prototypes ===== */

uint32_t Wheel(byte WheelPos);
uint8_t red(uint32_t c);
uint8_t green(uint32_t c);
uint8_t blue(uint32_t c);
void colorWipe(uint32_t c, uint8_t wait);
void pulseWhite(uint8_t wait);
void rainbowFade2White(uint8_t wait, int rainbowLoops, int whiteLoops);
void whiteOverRainbow(uint8_t wait, uint8_t whiteSpeed, uint8_t whiteLength);
void fullWhite();
void rainbowCycle(uint8_t wait);
void rainbow(uint8_t wait);

/* ===== rgbw-strandtest.cpp ===== */

SYSTEM_MODE(AUTOMATIC);

int photoresistor = A4;
int power = A5;
int analogvalue;
```



code & IFTTT

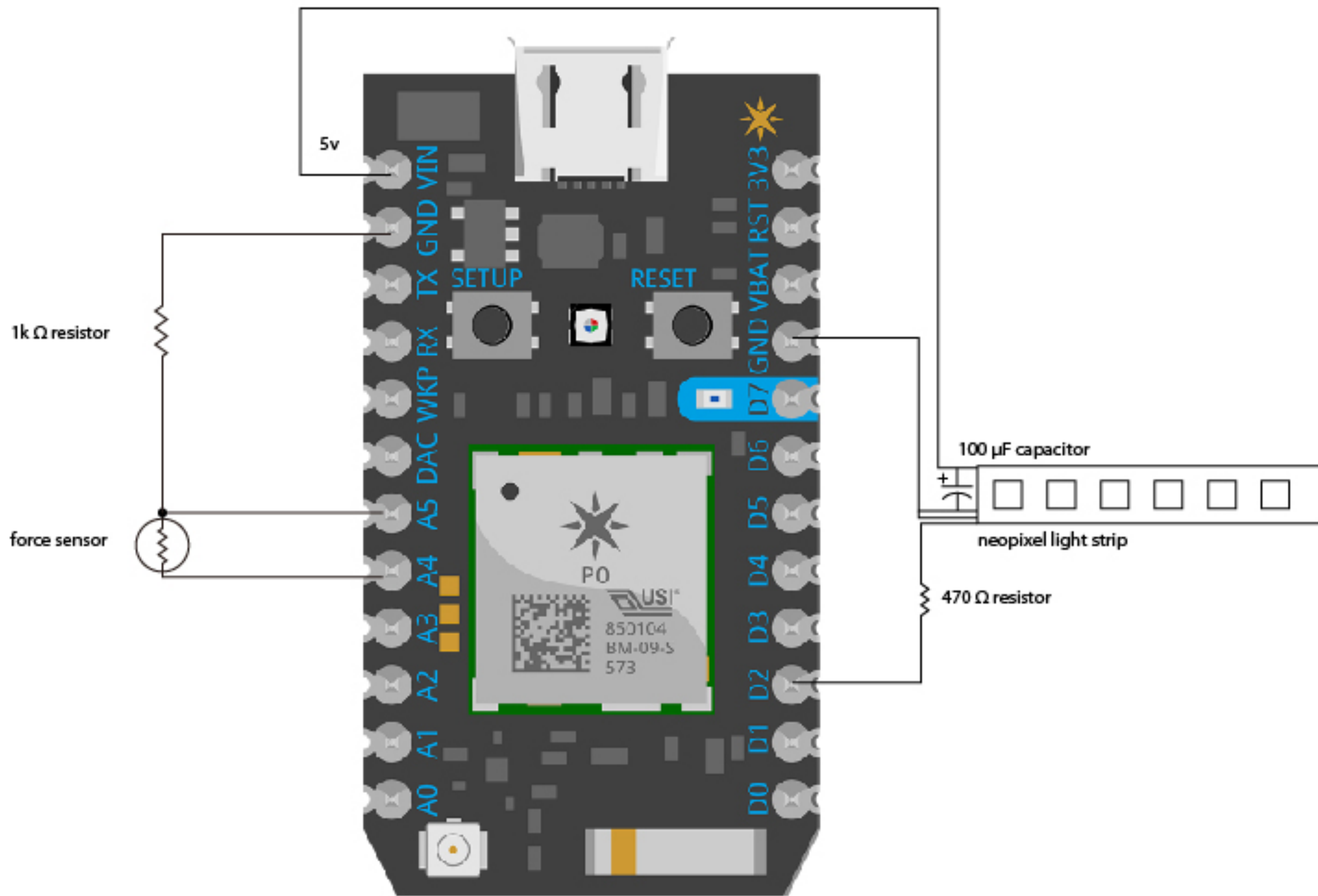


force sensor



led strip

SCHEMATIC

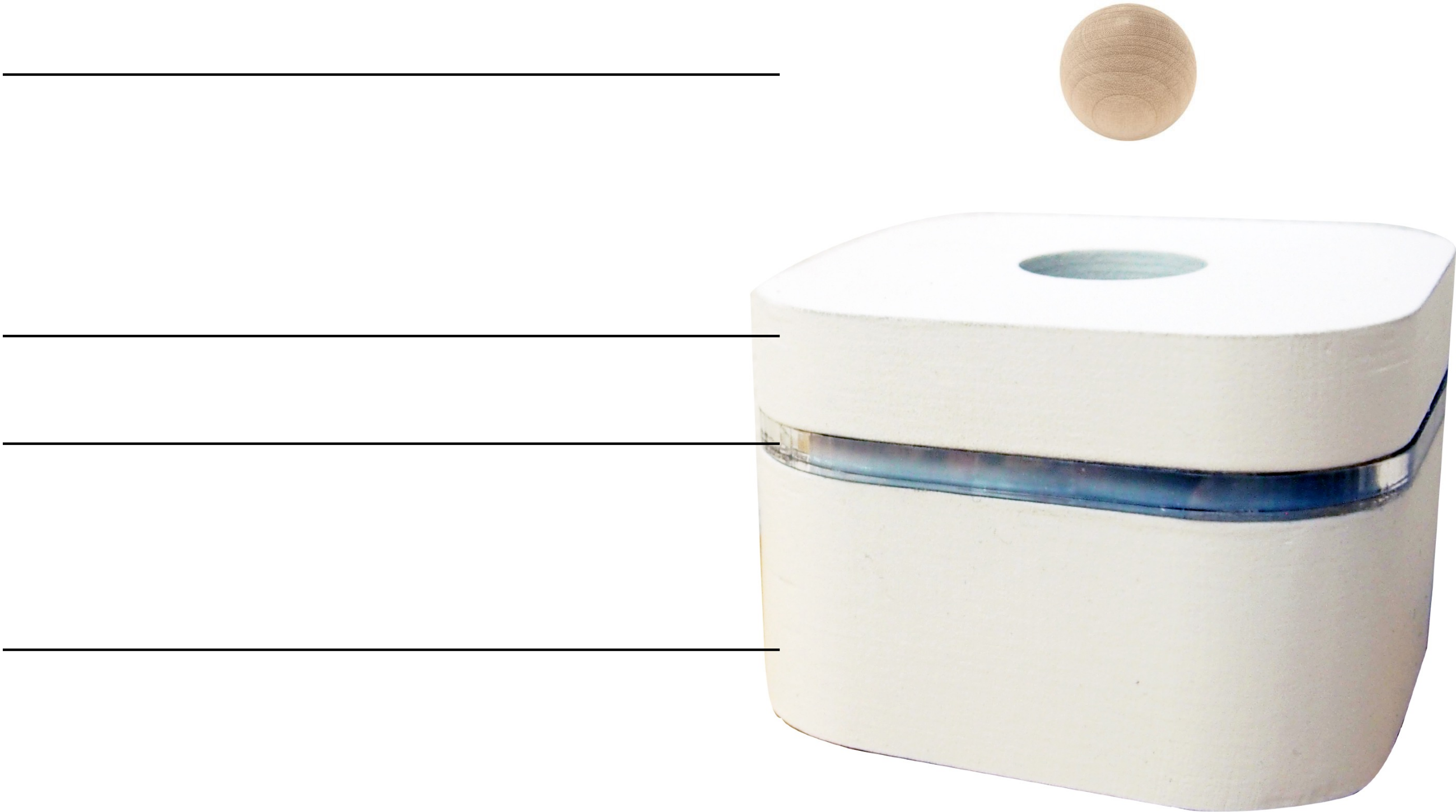


physical balls
with different weights

force sensor

neopixel led light strip

particle photon



SENSOR READING

wood ball



Particle.variable()

 analogvalue (Integer)

17

<20

acrylic ball



Particle.variable()

 analogvalue (Integer)

37

30-60

steel ball



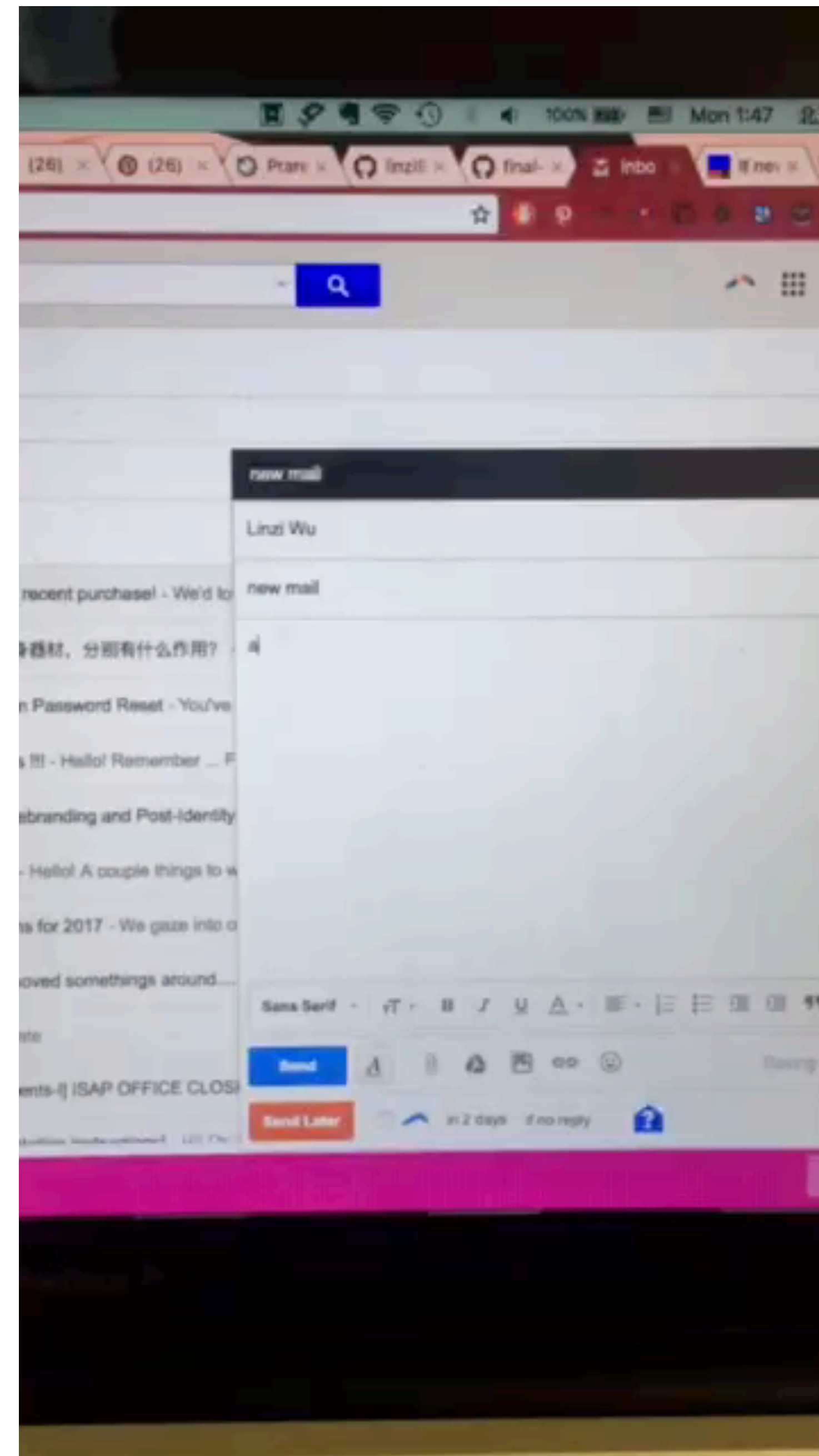
Particle.variable()

 analogvalue (Integer)

159

>100

setup:
once I sent an email to myself
when I'm in the medium focus
level (represented by the
acrylic ball), the led strip will
light up.



DIFFICULT PROBLEMS

– ELEMENTS AND DELIVERY

Have to figure out all the elements that are needed in the project ahead so that it arrives in time.

– CODE

First time to work with Photon and IFTTT. Have no idea how to let two softwares talk to each other.

– PHOTON CONNECTION

It's really hard to connect Photon to school wifi. So I have to bring it home to work at most time.

– PHYSICAL DEVICE

First time to make a physical case for electronic devices. Have to plan ahead before making the model. (Have to take the USB size into account, which I forgot at first.)

– ELECTRONIC/SOLDERING

Transferring all the electronic circuit part to the soldering board in a minimal size.