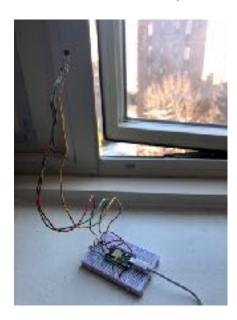
```
- {
      sensorday: 30,
      sensormonth: 11,
      mam_obs: "12",
      max_light: 3786,
     min_light: 15,
avg_light: "1641.1666566666666666",
      num_closedourtain: "9"
      sensorday: 5,
      sensormonth: 11,
      nun_obs: "8",
      max_light: 3711,
     min_light: 9,
avg_light: "2109.1250000000000000",
      num_closedcurtain: "6"
      sensorday: 20,
      sensormonth: 11,
      nun_obs: "12",
     max_light: 3734,
     min_light: 14,
avg_light: "1726.250000000000000000",
      num_closedcurtain: "9"
```

The above is the query of the data from two sensors: light and magnet.

I placed my breadboard on my windowsill, and taped the magnet on my curtain so that my hall sensor is able to detect it, as shown below.





I am interested in knowing approximately how many hours my curtain is pulled down and how that affects the change of light.

Since light changes continuously with time and I don't touch my curtain very often, I set the frequency for recording to every 2 hours.

Since the value from the hall sensor is either 1 or 0, to record the number of times that a magnet is detected, in other words, the times that a curtain is closed, I summed up the values in the column for the hall sensor from my table as num closedcurtain.

For example, on Nov 30, num_closedcurtain is 9, 9*2=18 is roughly the number of hours that a curtain is pulled down.

The variable num_observation is just to show me that if a complete data is recorded for a particular day. A complete number of observations should be 12 (24/2). For example, on Nov 9, the first day that I set up my sensors, there are only 8 so that I know that data is incomplete for that day.

Therefore, I came up with the design for the API. The circles are for the light sensor whereas the bars at the bottom are for the hall sensor. The two components are grouped together according to the date of being recorded.

