

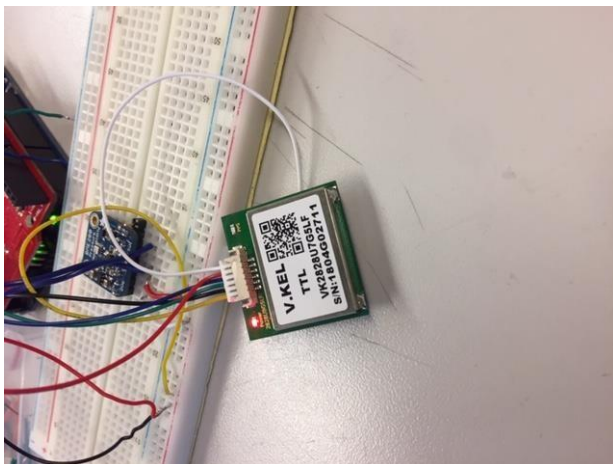
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## Documentation

My project initially started out as a larger scale project. My first proposal was a project that linked art, anxiety and heartrates, I then changed it to a different project that created a link between generative art and factors associated with walking. This project was meant to be in collaboration with CART 360, the programming aspect and hardware were created in unison to demonstrate my project. Unfortunately, due to my hardware choices, the Wi-Fi shield did not accept HTTPS certificates, therefore I could not use Google's geolocation services. Too late into the project, I realized that my Wi-Fi shield would not connect to the Wi-Fi networks which turned out to be unfortunate. Overall however, I did learn much about Arduino, Wi-Fi shields and sensors. Furthermore, I learned much about MySQL databases and PHP functions, specifically how POST requests work when using PHP and MySQL. I also learned how to use the Leaflet API and how to create functions that use the API's syntax. Overall I believe that this project aided me in understanding programming on a grander scale. For the hardware aspect, I was not too pleased of my final design, my stitching can use more practice to get a cleaner wearable, but I my design did function adequately for what I wanted. If I were to continue working on this project, I'd buy the Particle Photon Wi-Fi shield and use that to connect to geolocation and weather API to complete my project. If there was a grander scale for the project, I would like to have multiple hardware's available, so this would be more of a collective project rather than one person creating the artwork. I would also create a website with a friendlier, cleaner design and approach the map of the project in a different way.

## Documentation Photos



Testing the GPS and temperature Sensor



Final product

```
COM3 (Arduino/Genuino Uno)

7.42 m
Humidity = 45.29 %

Temperature = 20.89 °C
Pressure = 1008.75 hPa
Approx. Altitude = 37.53 m
Humidity = 45.41 %

My IP address is: 192.168.0.141

Temperature = 20.88 °C
Pressure = 1008.81 hPa
Approx. Altitude = 37.04 m
Humidity = 45.54 %

☒ Autoscroll ☐ Show timestamp Newline 9600 baud Clear output

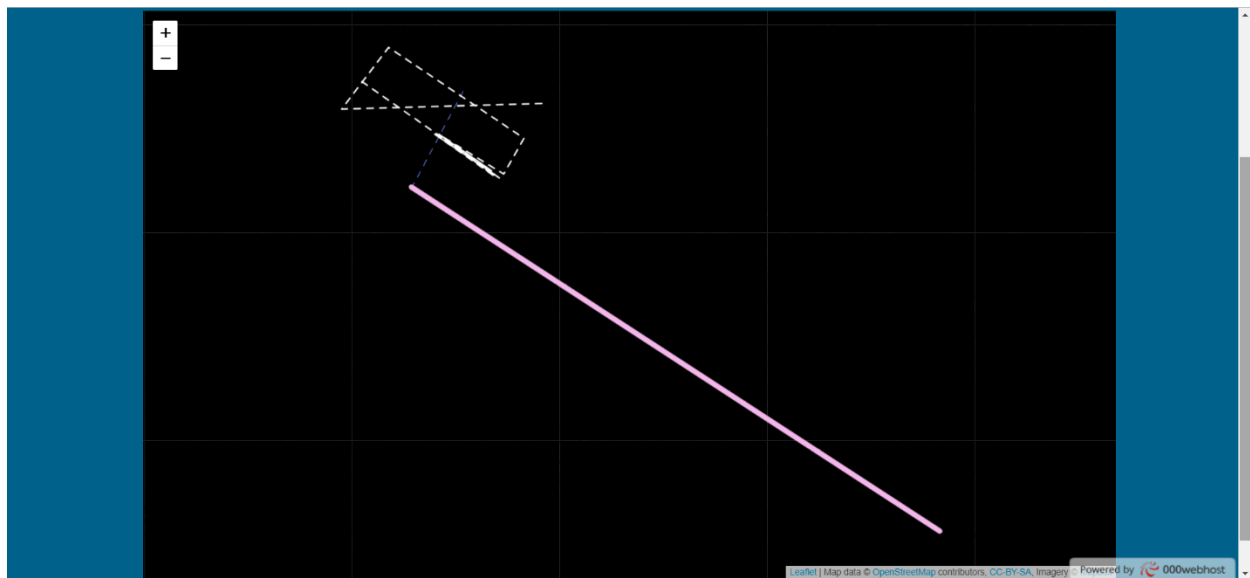
long lat, lon;
unsigned long fix_age, time, date, speed, course;
unsigned long chars;
unsigned short sentences, failed_checksum;
int GPS_flag=0;
//int year;
//byte month, day, hour, minute, second, hundredths;

int DEG;
int MIN1;
int MIN2;
// Include the ESP8266 AT library:
#include <SparkFunESP8266WiFi.h>

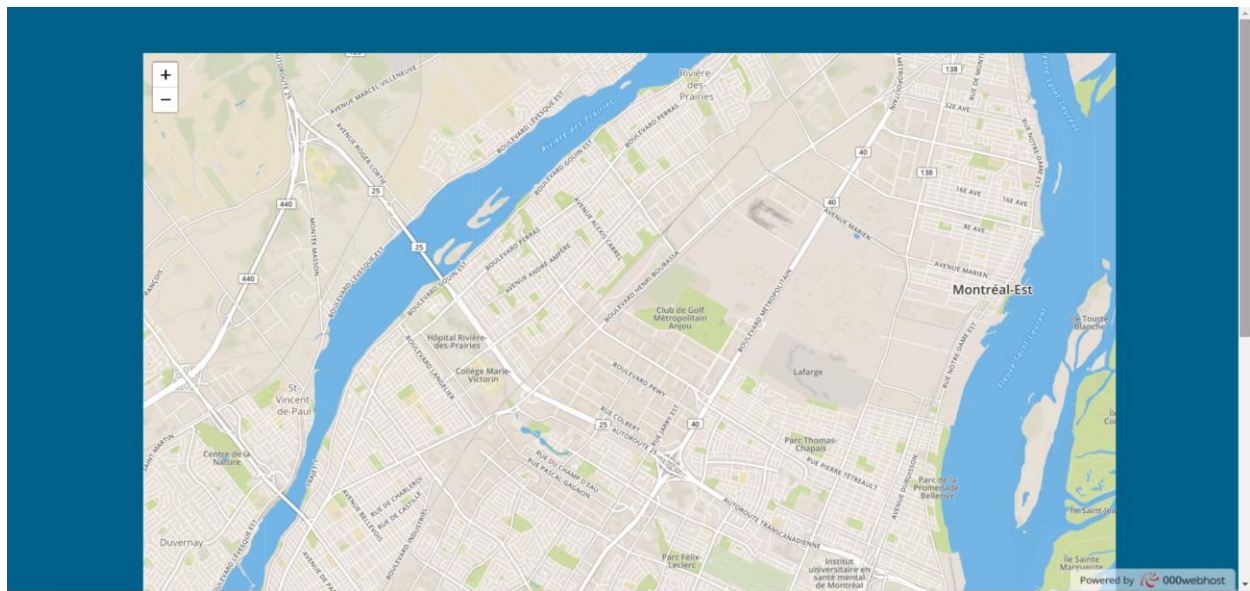
#define BME_SCK A5
//#define BME_MISO 12
#define BME_MOSI A4
//#define BME_CS 10

#define SEALEVELPRESSURE_HPA (1013.25)//change this accordingly
```

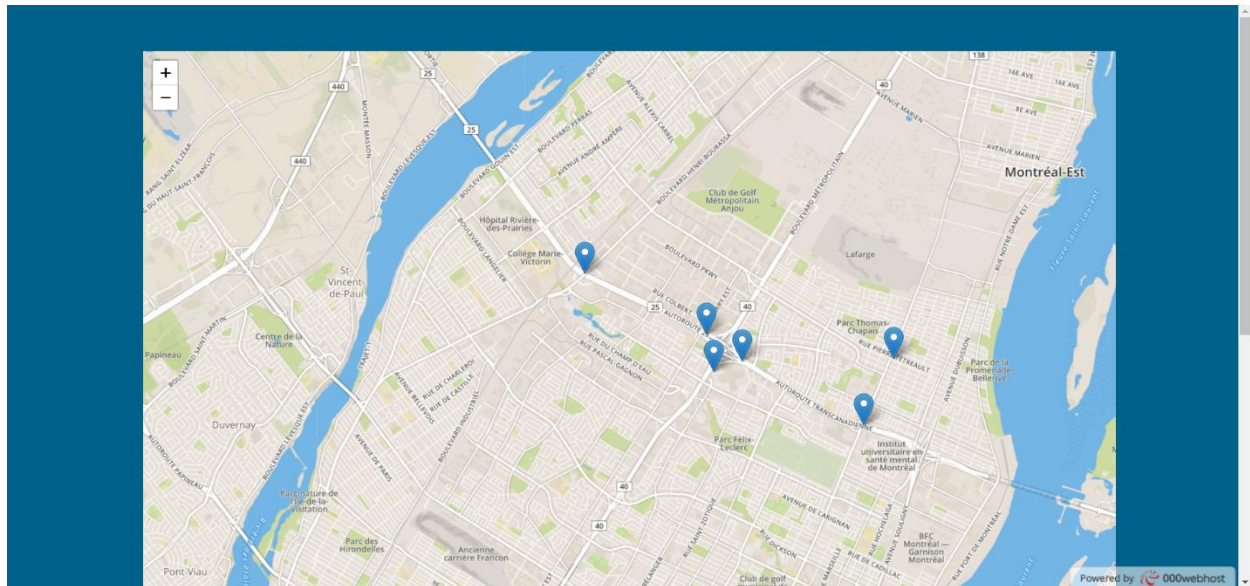
Functioning temperature Sensor and Wi-Fi shield.



Initial look at the map



Map when adding the users location



Points are created when the user clicks.

Draw a location Clear location

Input the parameters corresponding to your route.

Light or Dark Area  
1

Temperature  
-12

Geographic Location  
Driving

Coordinates (Extracted From Map)  
-73.59562684781851, 45.61576647119191

Collect points

Keywords  
Driving

Save

Filling in the parameters



End result.