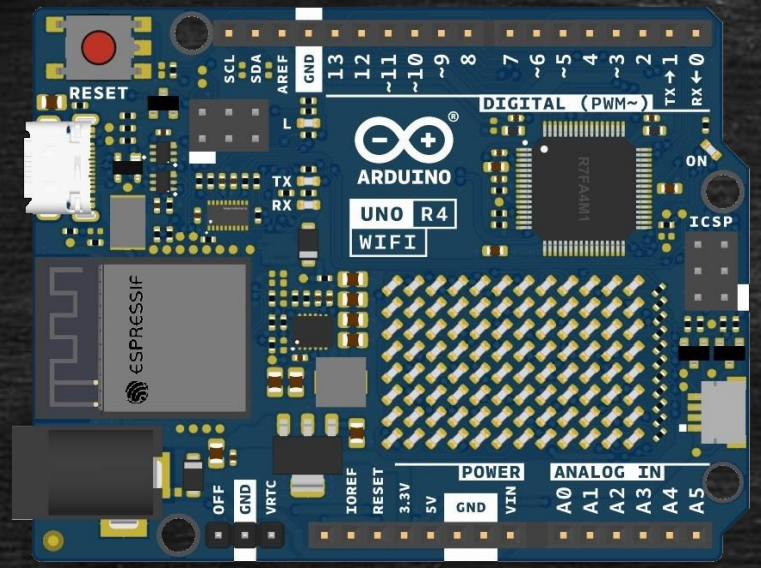
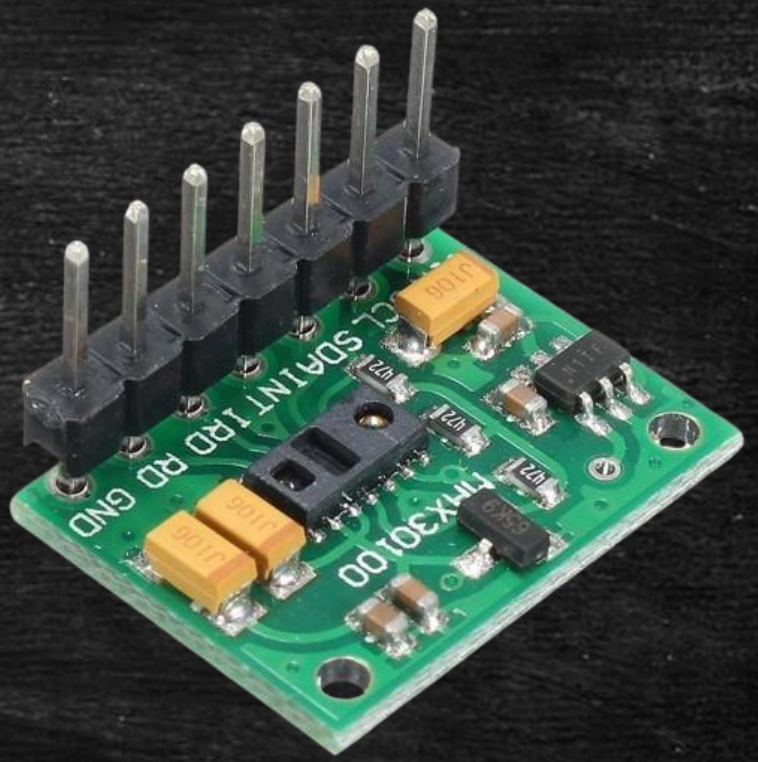
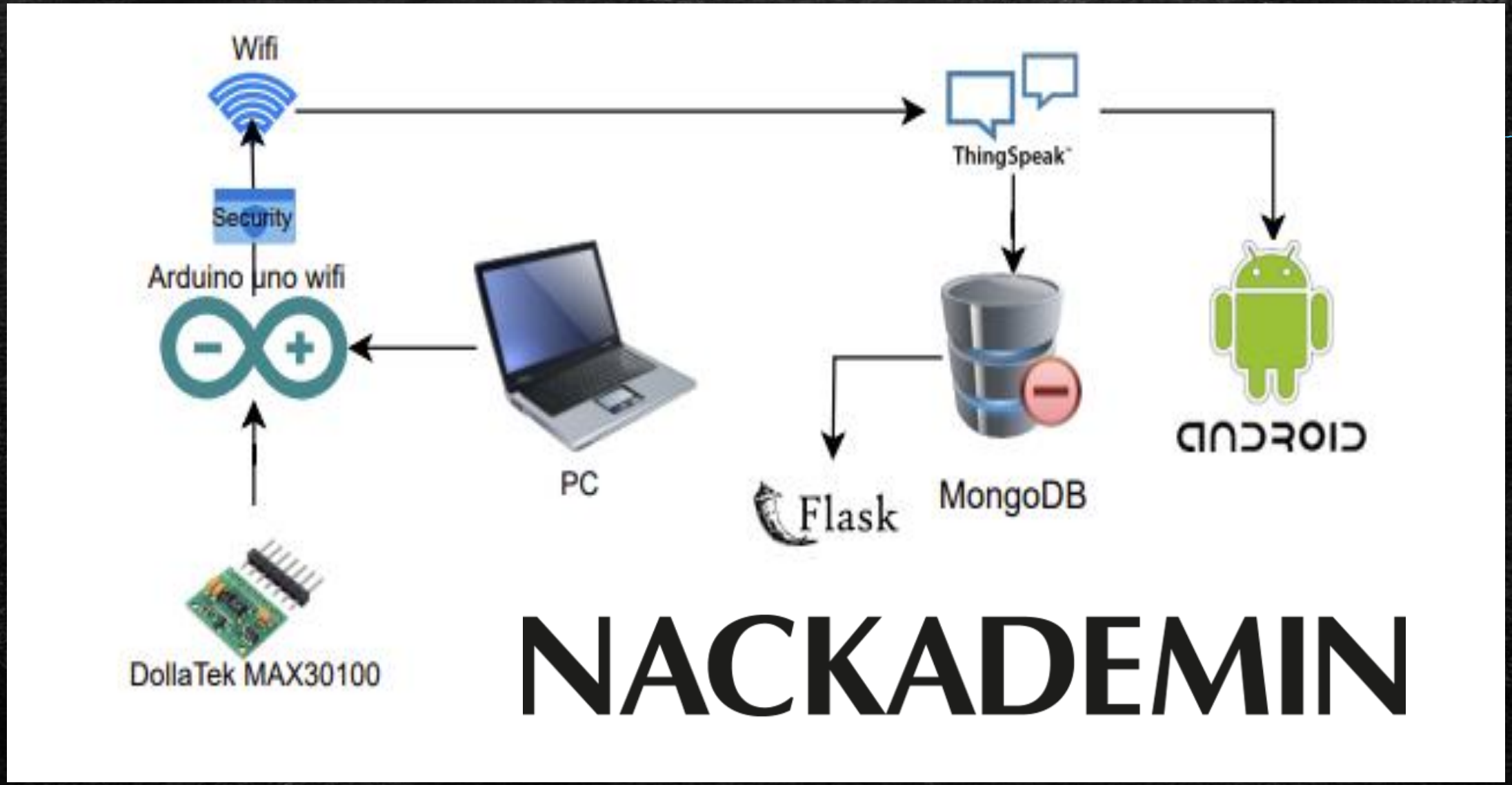


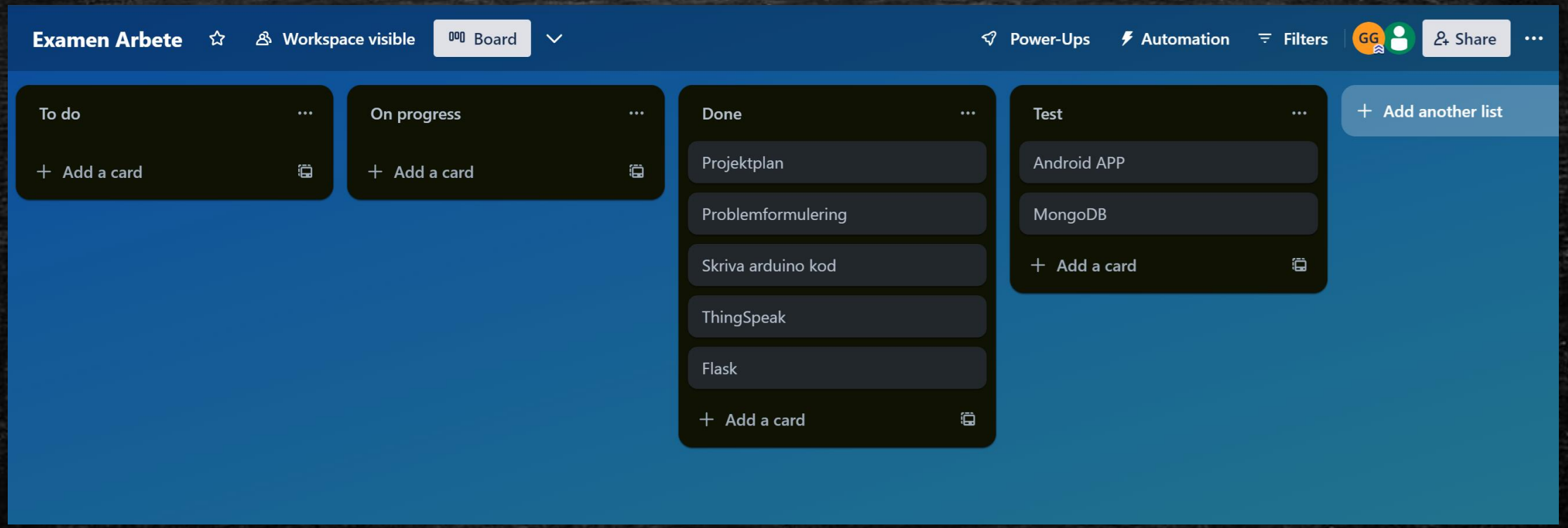

# Examen arbete

Elever: Jekaterina Jelisejeva, George Glor

Koppla dollatek max30100 med Arduino Uno R4 Wifi , ThingSpeak, MongoDB, Flask med Android App.


Wifi
ThingSpeak
Security
Arduino uno wifi
PC
Flask
MongoDB
android
DollaTek MAX30100
NACKADEMIN

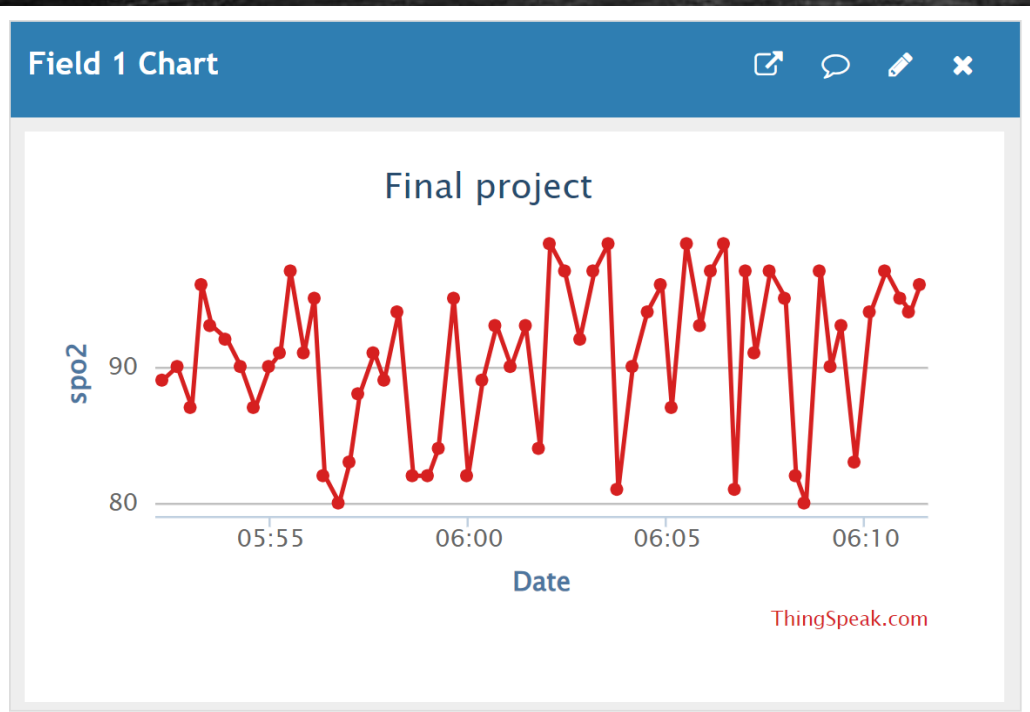
# Trello Översikt: Projektstyrning och Arbetsflöde

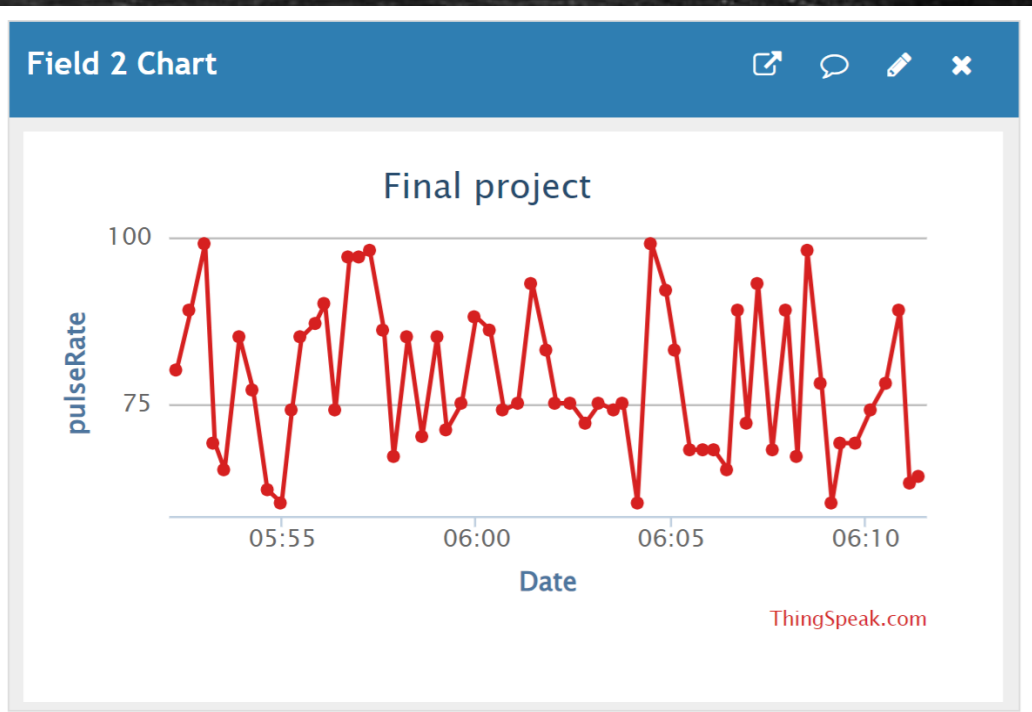


# Bibliotek som är viktiga för att läsa av sensorn och koppla upp allt mot ThingSpeak.

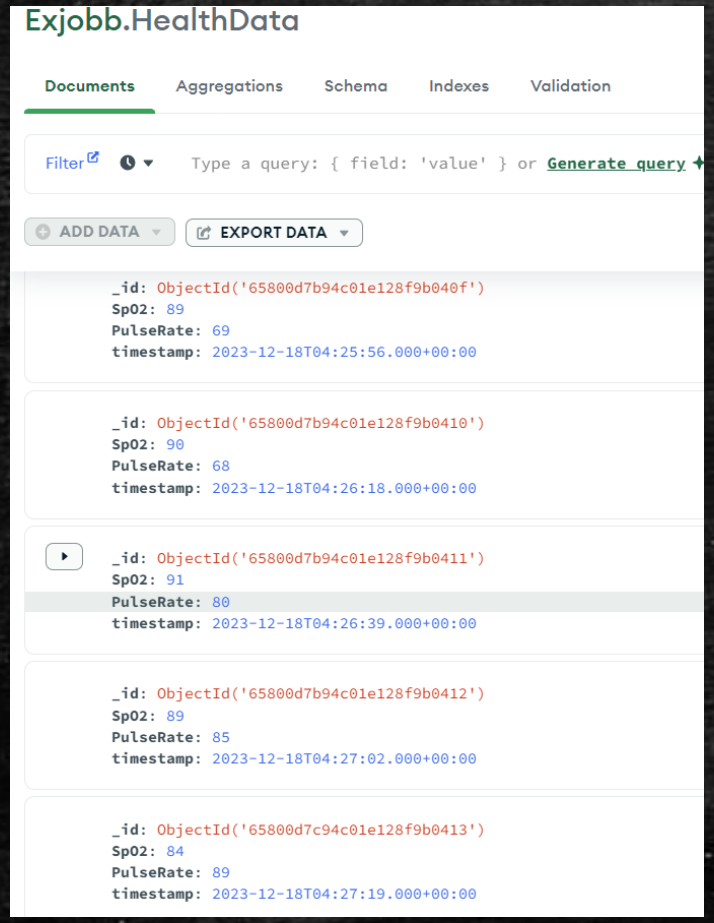
```
#include <Wire.h>
#include <MAX30100.h>
#include <WiFiS3.h>
#include "ThingSpeak.h"
#include
<MAX30100_PulseOximeter.h>

float spo2, pulseRate;
readSensorData(spo2, pulseRate);
Serial.print("SpO2 = ");
Serial.print(spo2);
Serial.println(" %");
Serial.print("Pulse Rate = ");
Serial.print(pulseRate);
Serial.println(" BPM");
```

# Resultaten i ThingSpeak



# Visualisering av Data med MongoDB: Utforska Representationer av Dina Dokument




- import pymongo
- from pymongo import MongoClient
- import requests
- 
  client = MongoClient(mongodb_uri)
- db = client.Exjobb
- collection = db.HealthData

# Oxygen och Puls Statusbedömning: Dynamisk Hälsostatus baserad på Värden

```
String oxygenStatus = "Normal";
if (oxygen < 90) {
    oxygenStatus = "Low Risk";
} else if (oxygen < 80) {
    oxygenStatus = "High Risk";
}

String pulseStatus = "Normal";
if (pulse < 60 || pulse > 100) {
    pulseStatus = "Not normal";
}
```

# Visualisering som hämtas från ThingSpeak.