

Emergency Response System

JishinSensa - 自信センサ

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OVERVIEW



Emergency response solution for detecting city disaster events based on sensor data and social network publications.

SOLUTION COMPONENTS



Hardware components of the solution:

- 1 Qualcomm Dragonboard 410c board
- 1 Arrow Linker Mezzanine Card Kit with:
 - 1 temperature sensor
 - 1 tilt sensor
 - And 1 LDR sensor



DRAGONBOARD WITH SENSORS



SOLUTION COMPONENTS



Platform components of the solution:

- AWS IoT Platform
- Twitter



Software components of the solution:

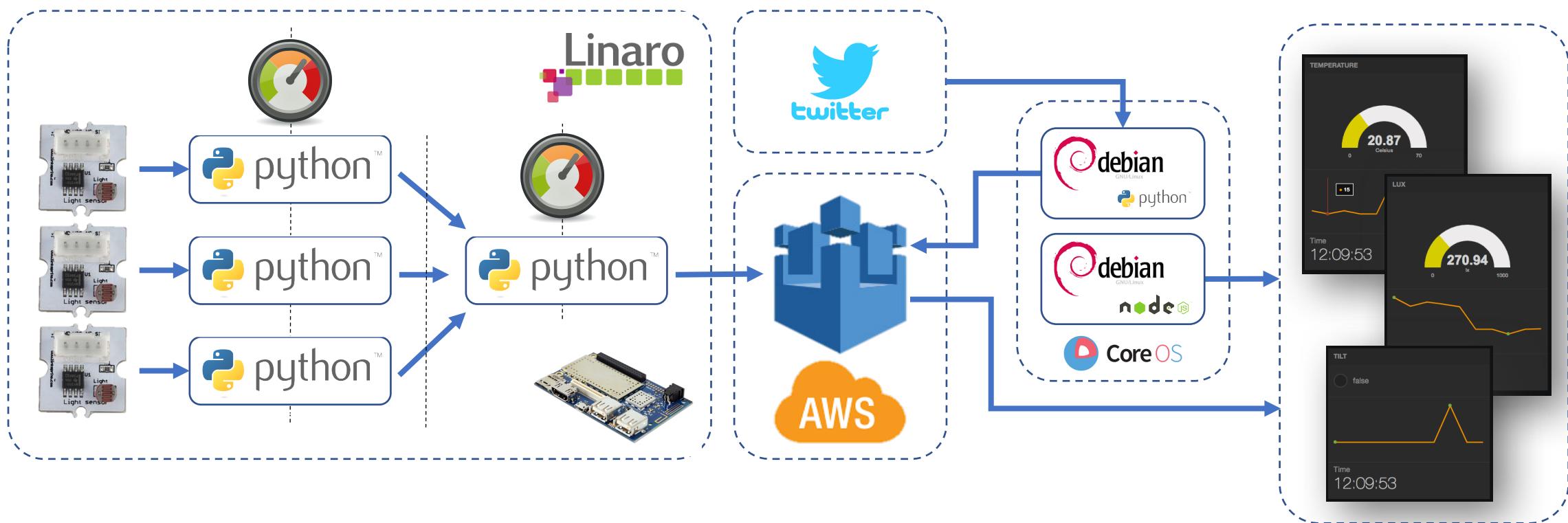
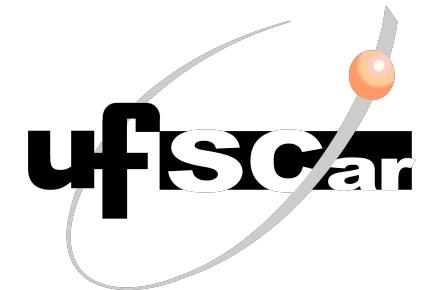
- Linaro, CoreOS and Debian operating systems
- Python services on the device and some backend services
- NodeJS on the Graphical User Interface



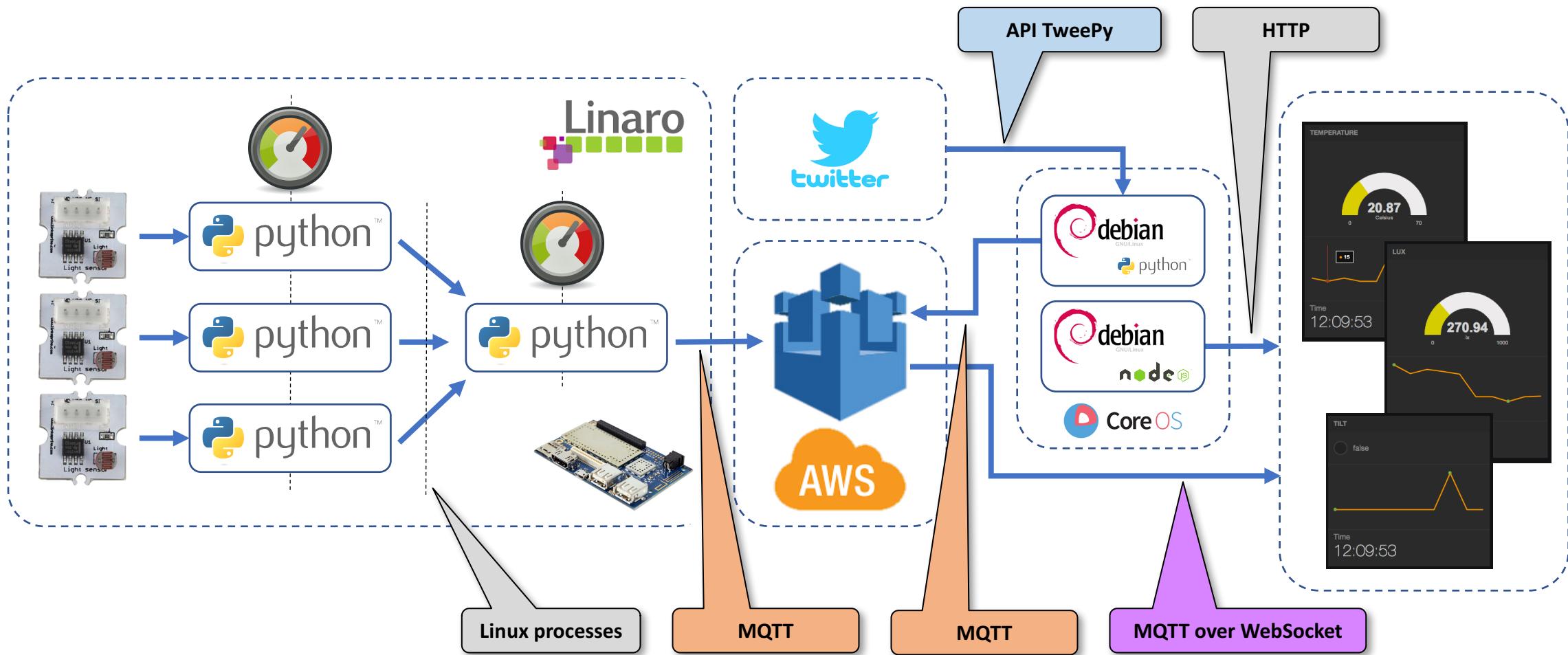
Core OS



SOLUTION OVERVIEW

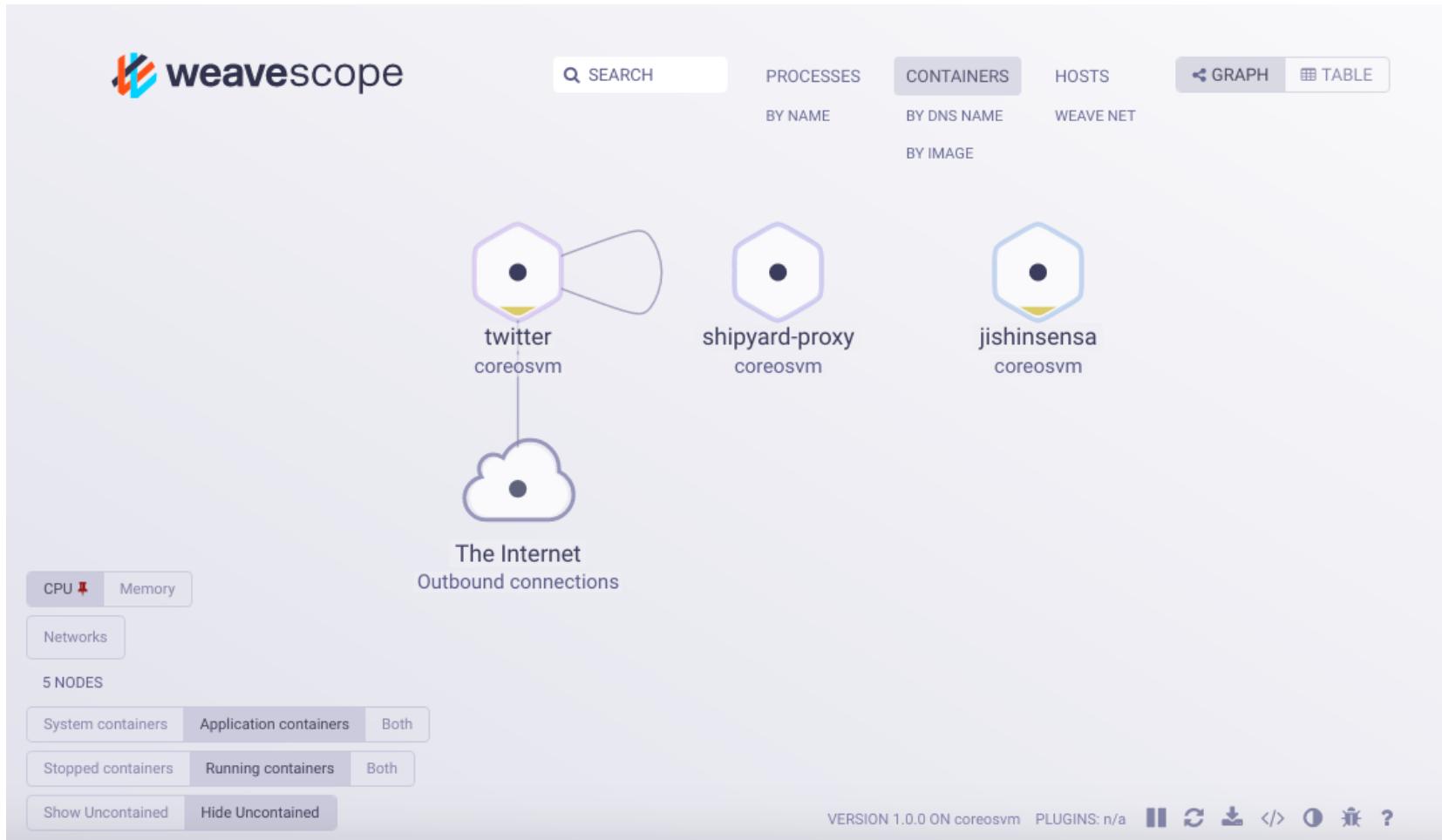


PROTOCOLS

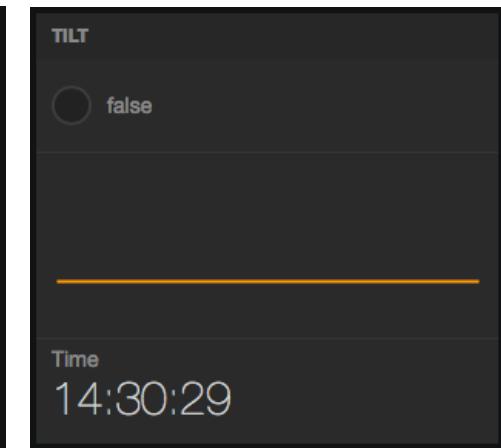
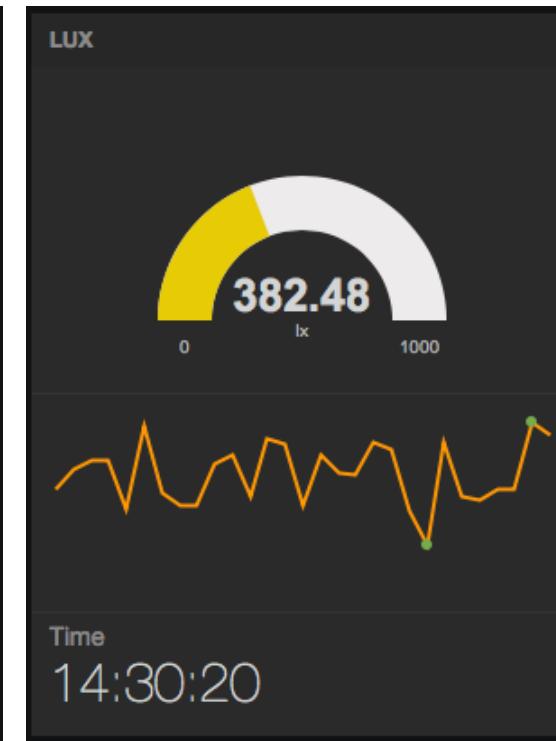
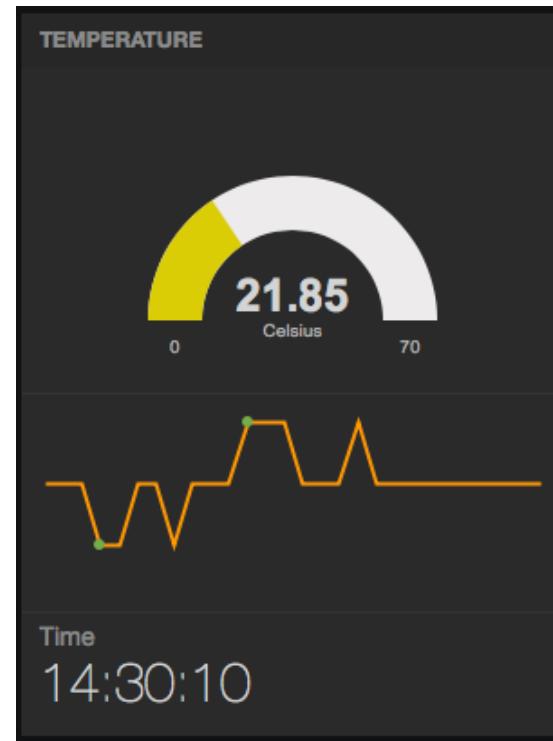
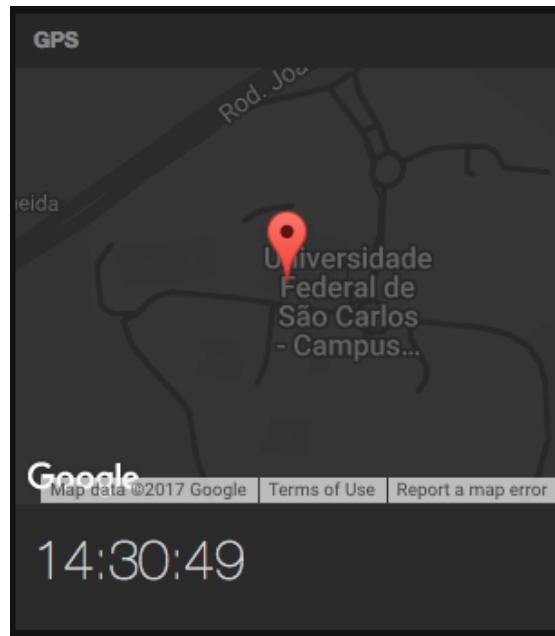


PORTAL AND TWITTER SERVICES

DOCKERNIZED COMPONENTS



APPLICATION DASHBOARD CARDS



APPLICATION DASHBOARD

TWITTER EMERGENCY DETECTION WINDOW

A screenshot of a Mac OS X application window titled "freeboard". The window displays a dashboard for "JISHINSENSA EMERGENCY RESPONSE".

JISHINSENSA EMERGENCY RESPONSE

Tremor UFSCar CCS012 2017

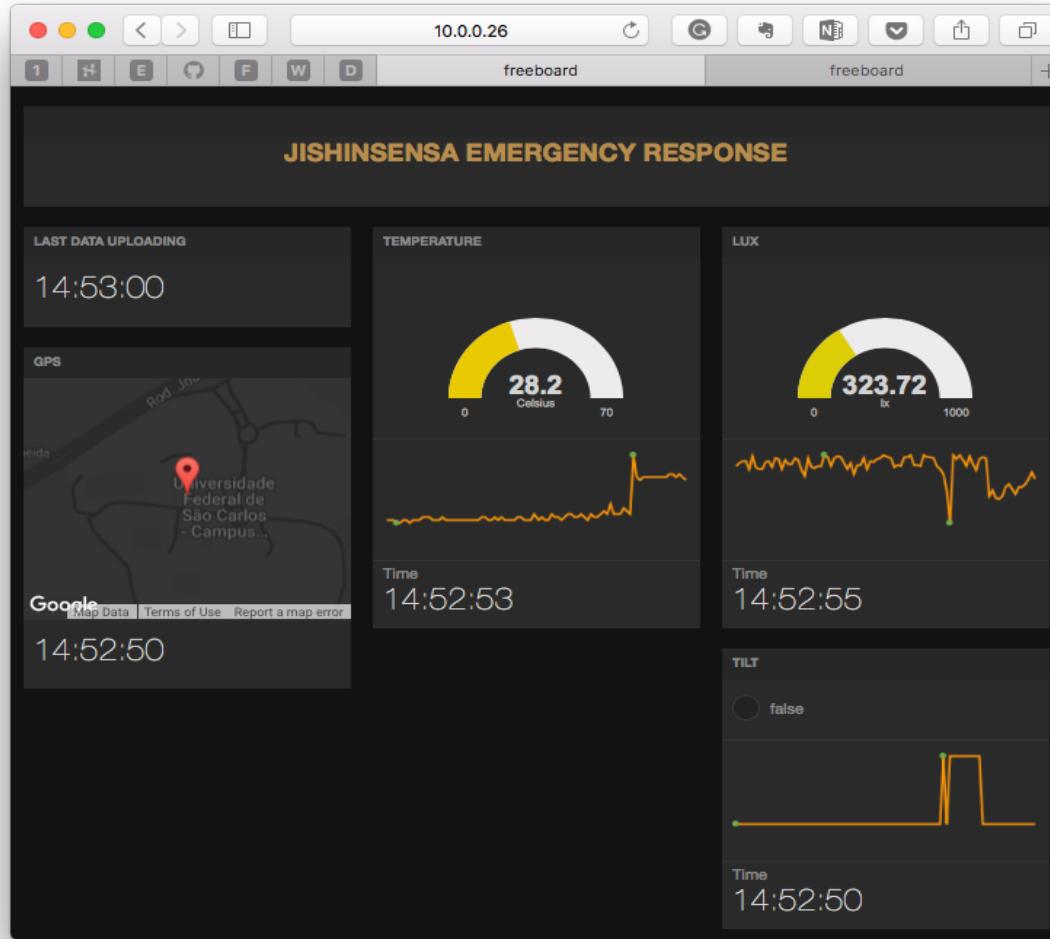
EARTHQUAKE ALARM
Emergency! Earthquake!
 Set Earthquake Threshold

FLOODING ALARM
Emergency! Flooding!
 Set Flooding Threshold

14:54:29

The dashboard includes a map of a city area with a red marker indicating a location. The map is from Google and includes street names like "Av. Concepção", "Av. Pres. Vargas", and "Rodrigo Otávio". The bottom left of the map shows "Google" and "Map data ©2017 Google".

APPLICATION DASHBOARD ON BROWSER WINDOW



APPLICATION DASHBOARD ON MOBILE SCREEN





GITHUB CODE

- Code available in GitHub at:
[https://github.com/hirleydayan/ufscar/tree/master/CCS012/Final Project](https://github.com/hirleydayan/ufscar/tree/master/CCS012/Final_Project)
- JishinSensa Instructable link:
<https://www.instructables.com/id/JishinSensa>