

M2M

AdaFruit : Faire de la musique avec n'importe quoi

SOMMAIRE

- Présentation générale du projet
- Matériel et Architecture
- Démonstration

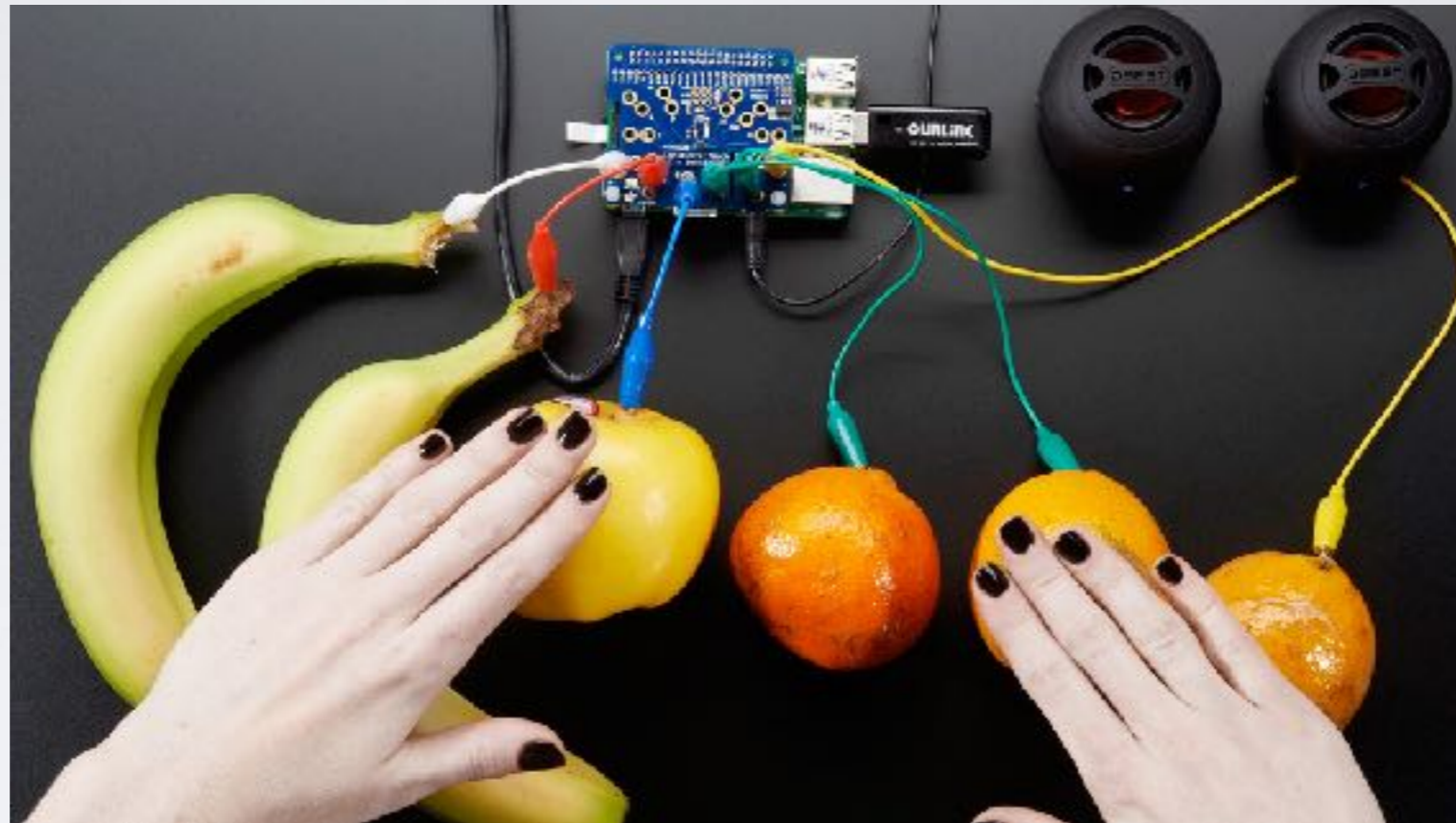


- Compagnie produisant du matériel libre qui a été mise sur pieds par Limor Fried alors qu'elle était encore dans son dortoir au MIT
- Vend une grande variété de composants électroniques

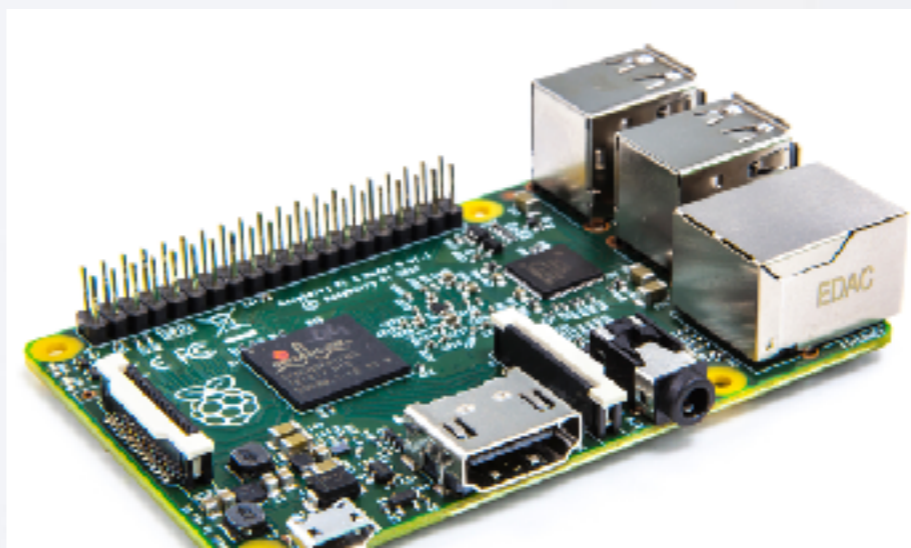


MATÉRIEL

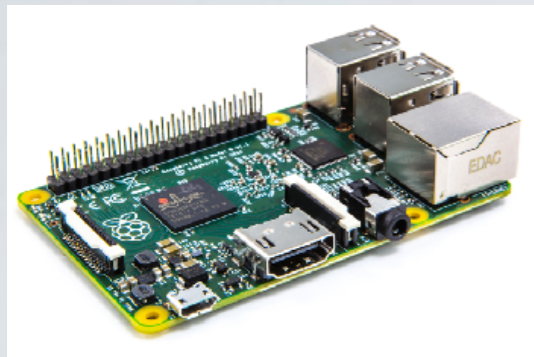
Capacitive Touch HAT for Raspberry Pi - Mini Kit - MPR121



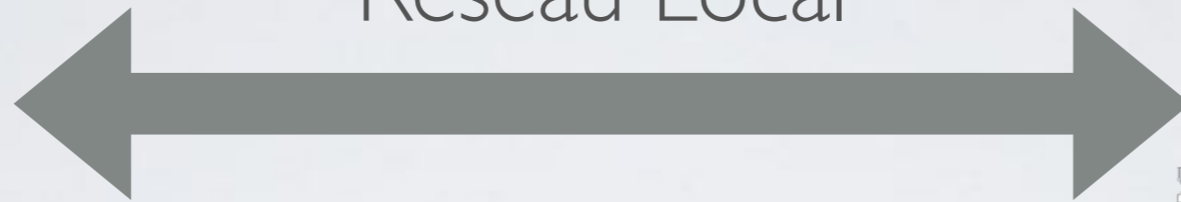
Raspberry piV2



ARCHITECTURE LOGICIELLE



Réseau Local



MQTT
Publish



topic released

topic touched



Fichier Python

MQTT



SCRIPT PYTHON

- Récupérer les états des capteurs sur le GPIO du Raspberry (Tutoriel disponible sur AdaFruit)
- Signaler le changement d'états en publiant sur un topic MQTT
- Jouer un son à chaque changement d'état sur la sortie du PI (HDMI ou jack)

NODE RED

The screenshot displays the Node-RED web interface. On the left, a sidebar contains node categories: social (e mail, twitter), storage (tail, file, influxdb), and analysis (sentiment). The main workspace, titled 'Flow 1', shows a flow with two input nodes: 'released' and 'touched', both marked as 'connected'. The 'released' node is connected to two 'mag' nodes and one 'mydata' node. The 'touched' node is connected to one 'mydata' node. On the right, a 'debug' console shows the following log entries:

```
08/04/2017 à 12:16:43 node: 6a815158.f5878
released : msg : Object
> { topic: "released", payload: "0", qos: 0, retain:
false, _msgid: "5236076.0e98ff8" }

08/04/2017 à 12:16:43 node: 6a815158.f5878
released : msg : Object
> { topic: "released", payload: "0", qos: 0, retain:
false, _msgid: "85099fcf.2abf3" }

08/04/2017 à 12:16:44 node: 6a815158.f5878
released : msg : Object
> { topic: "released", payload: "3", qos: 0, retain:
false, _msgid: "1c256599.d29e6a" }

08/04/2017 à 12:16:44 node: 6a815158.f5878
released : msg : Object
> { topic: "released", payload: "4", qos: 0, retain:
false, _msgid: "24295c3a.cf8e74" }

08/04/2017 à 12:16:45 node: 6a815158.f5878
released : msg : Object
> { topic: "released", payload: "5", qos: 0, retain:
false, _msgid: "4e7f0478.2f056c" }

08/04/2017 à 12:16:46 node: 6a815158.f5878
released : msg : Object
> { topic: "released", payload: "5", qos: 0, retain:
false, _msgid: "45b891f6.189d9" }
```

INFLUX DB

[Write Data](#)[Documentation](#)

Database: mydata ▾



2017-04-08T09:53:07.261213072Z

"0"

2017-04-08T09:53:08.005364465Z

"0"

2017-04-08T09:53:10.10029737Z

"0"

2017-04-08T09:53:12.835498422Z

"3"

2017-04-08T09:53:13.622774984Z

"4"

2017-04-08T09:53:14.884463025Z

"5"

2017-04-08T09:53:34.917031566Z

"11"

2017-04-08T09:53:37.257645271Z

"10"

2017-04-08T09:53:37.774675783Z

"11"

2017-04-08T09:53:40.026391168Z

"10"

2017-04-08T09:53:41.022445896Z

"9"

2017-04-08T09:53:41.612221028Z

"8"

2017-04-08T09:53:41.865365757Z

"6"

2017-04-08T09:53:43.889963289Z

"0"

2017-04-08T09:53:44.833750479Z

"2"

2017-04-08T09:53:45.800092615Z

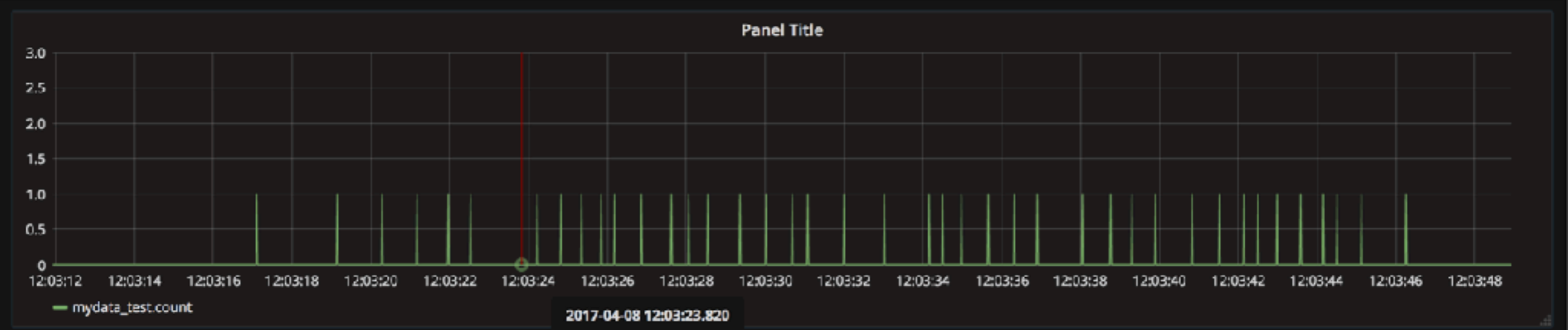
"0"

2017-04-08T09:53:47.03515792Z

"4"

GRAFANA

Navigation bar with icons for settings, dashboard management, and time range selection. Includes text: "New dashboard", "Back to dashboard", "Zoom Out", and "avr. 8, 2017 12:03:11 to avr. 8, 2017 12:03:48".



Configuration tabs for the graph: **Graph**, General, **Metrics**, Axes, Legend, Display, Alert, Time range.

FROM	one_year	mydata_test	WHERE	+	
SELECT	field (value)	count ()	+		
GROUP BY	time (auto)	fill (null)	+		
ALIAS BY	Naming pattern		Format as	Time series	▼

Panel data source: default | + Add query

DÉMO