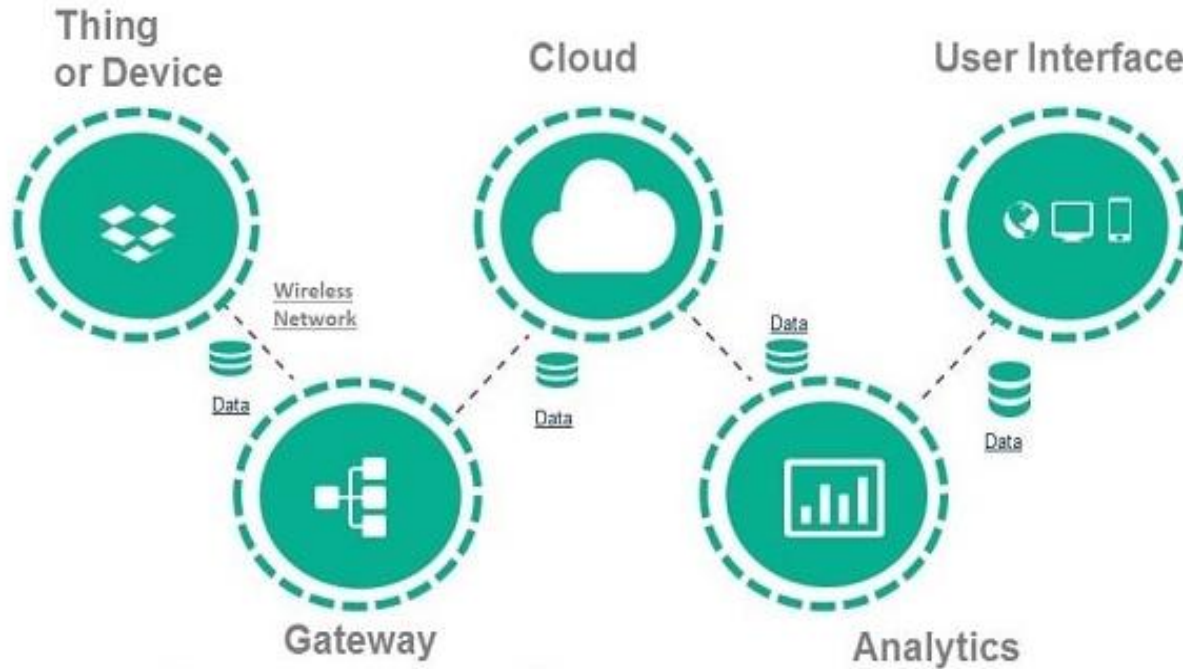


Pengenalan Industri 4.0 dan Internet of Things (IoT)

[Konsep dan Pendekatan Praktis]



Agus Mulyana



Phone : 082116871007

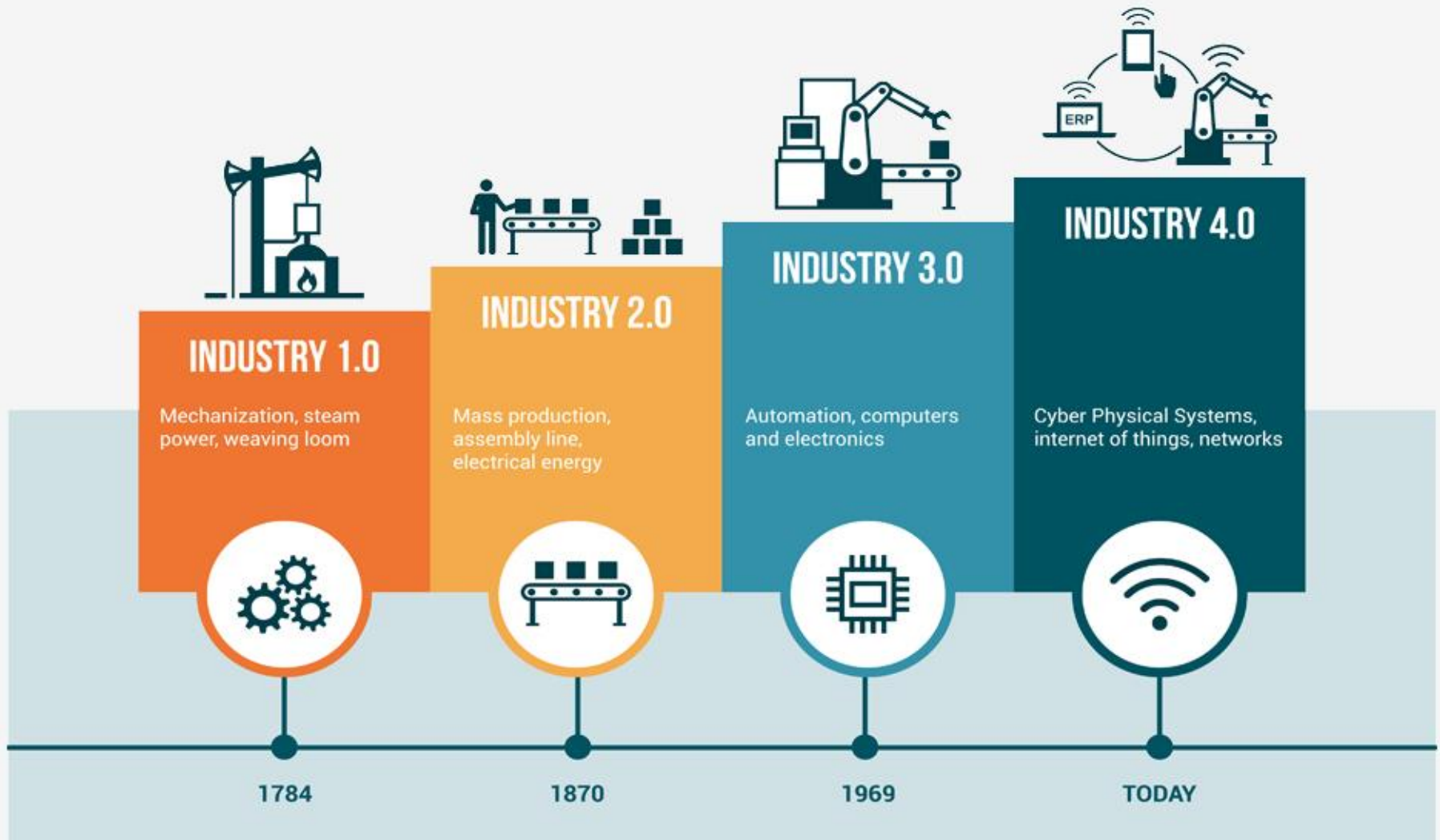


Email : bagus081@gmail.com



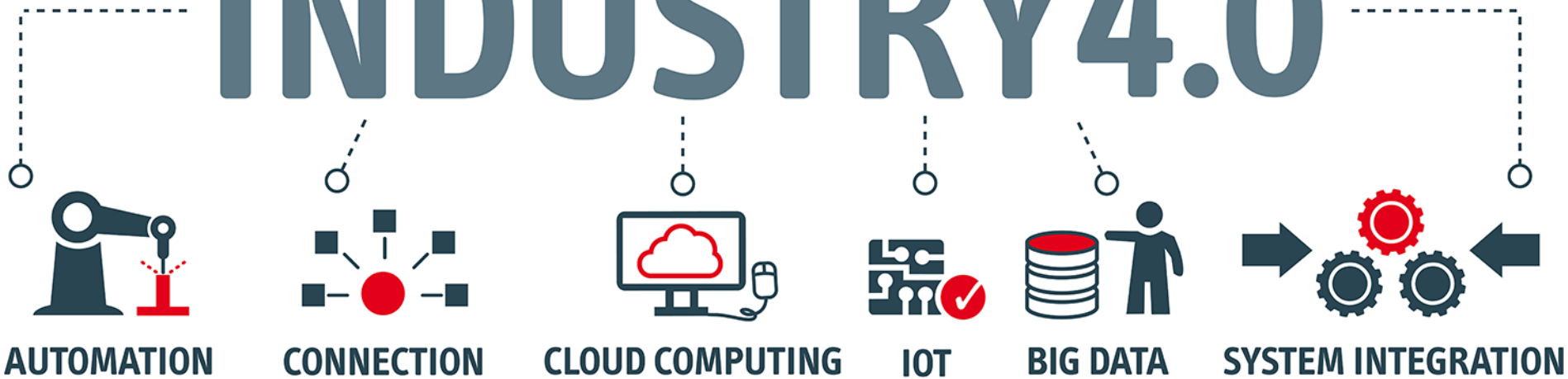
www.agusmulyana.net

The Evolution of Industry



Industri 4.0

INDUSTRY4.0



Industry 4.0 is the evolution to cyber-physical systems, representing the fourth industrial revolution on the road to an end-to-end value chain with Industrial IoT and decentralized intelligence in manufacturing, production, logistics and the industry.

New Wave of Computing

We are entering a
New Wave of Computing

Mainframes

1950s

Personal
Computers

1980s

Smartphones

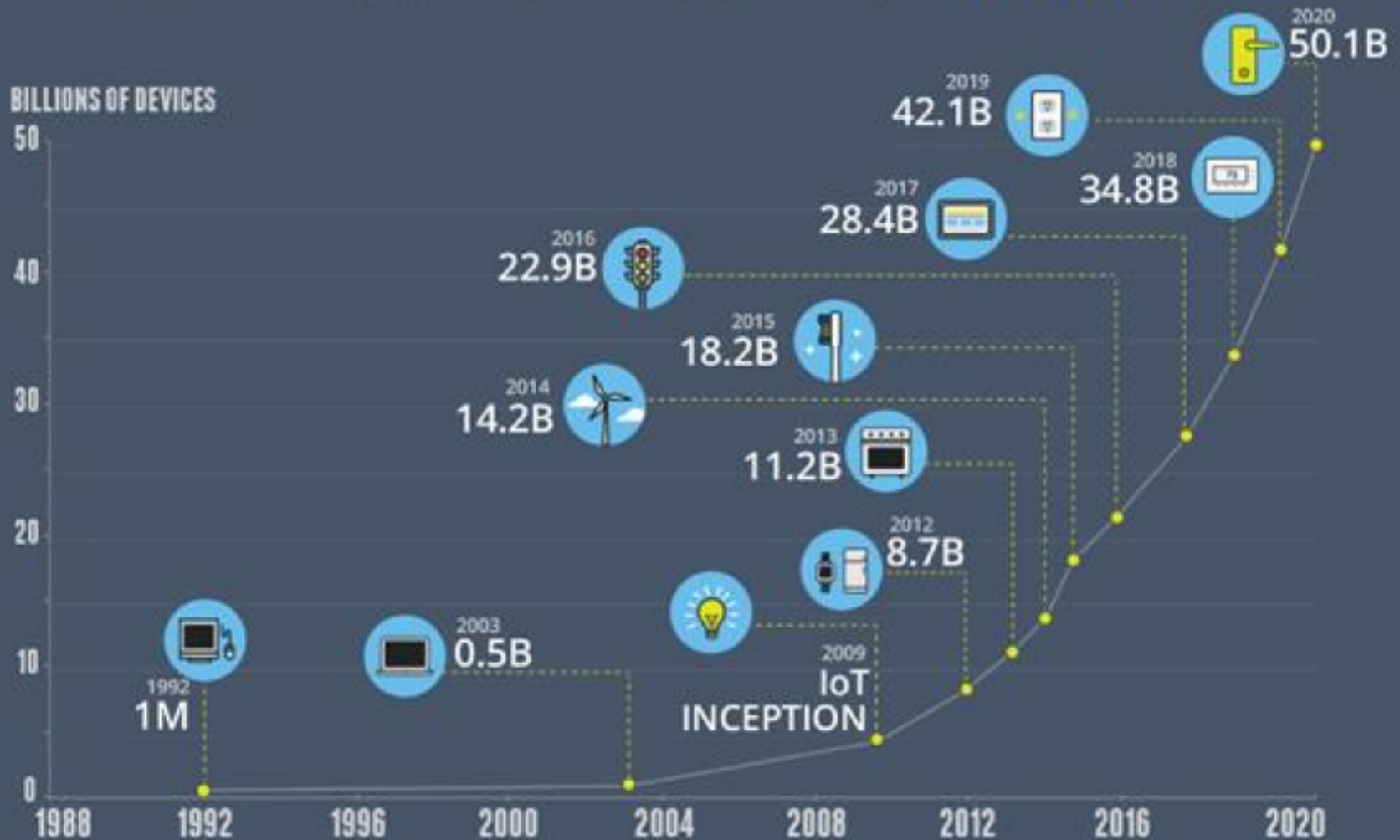
2000s

Everything

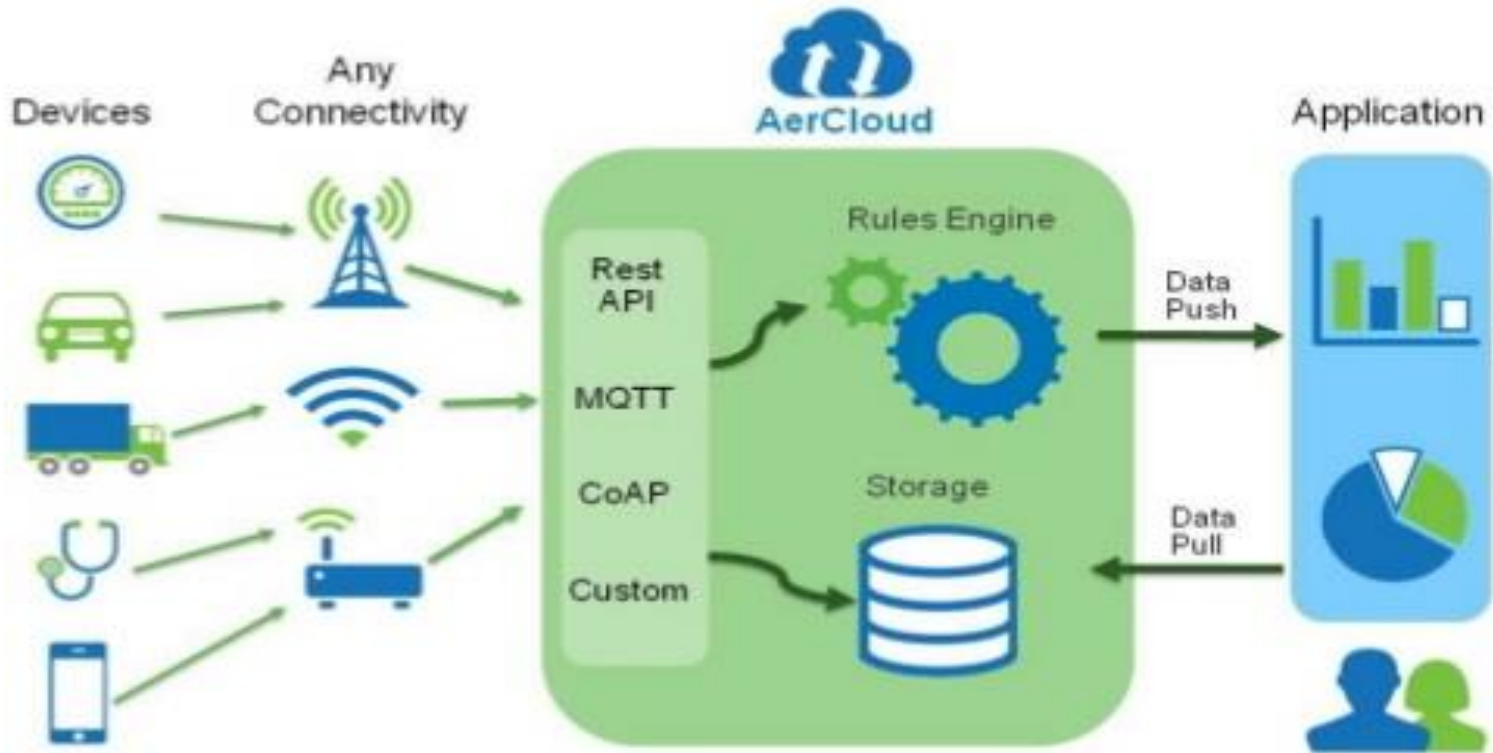
Today

GROWTH IN THE INTERNET OF THINGS

THE NUMBER OF CONNECTED DEVICES WILL EXCEED **50 BILLION** BY 2020



What is The Internet of Things ?



Internet of Things is an emerging paradigm of internet connected things that allows the physical objects or things to connect, interact and communicate with one another similar to the way humans talk through web in today's environment. It connects systems, sensors and actuator instruments to the broader internet.



Internet of Things Applications



Healthcare



Energy



Building



Retail



Security



Home



Education



Transportation



IoT



Agriculture



Factory



Cloud Computing



IoT Potential Market in Indonesia

Telko.id – Indonesia saat ini memiliki populasi lebih dari 235 juta penduduk dan 297 juta pengguna mobile. Hal ini menjadikan Indonesia negara terbesar keempat di dunia, yang diperkirakan akan menjadi pemain utama dalam pertumbuhan IOT terbesar di Asia Tenggara.

<https://telko.id/6588/ini-dia-potensi-pasar-iot-di-indonesia/>

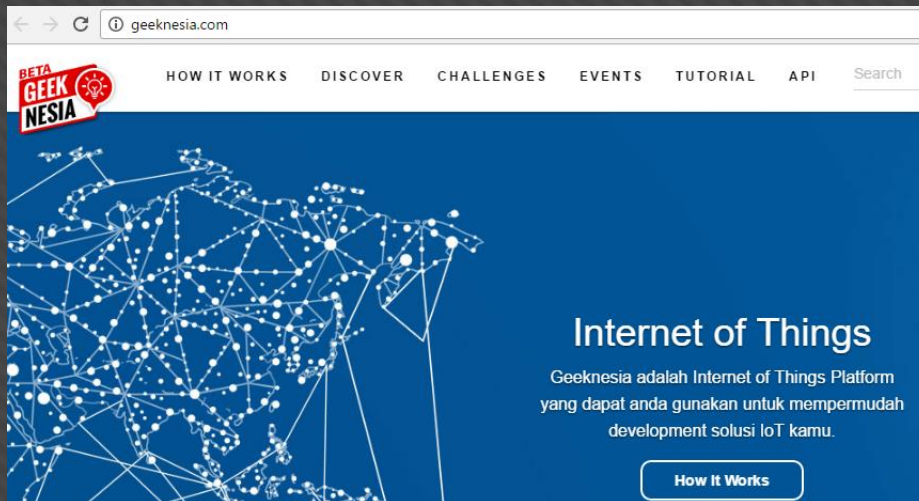
IoT Startups from Indonesia



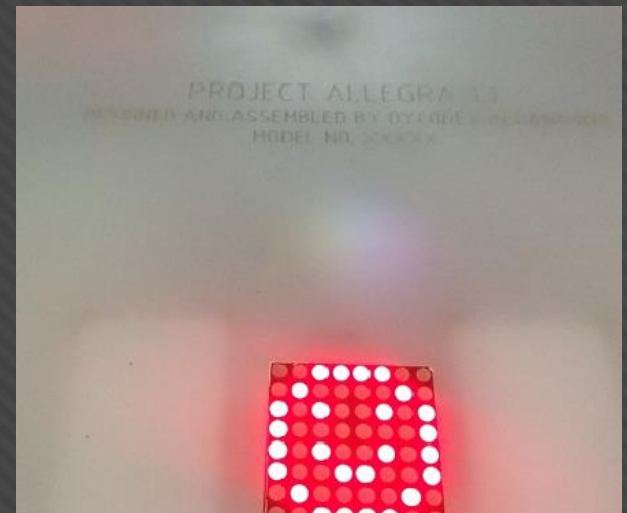
<https://cubeacon.com/>



<http://efishery.com/>



<http://geeknesia.com/>

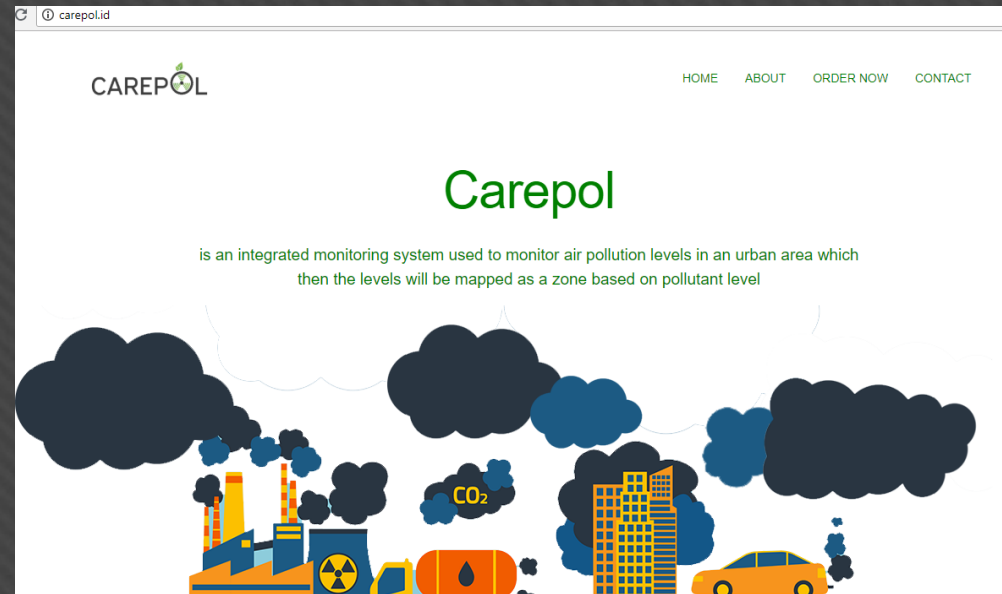
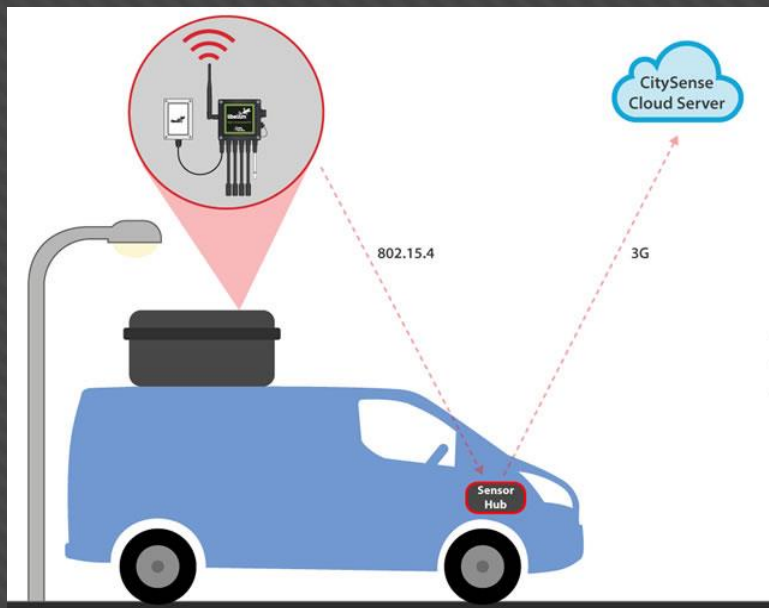


<https://dycode.co.id/>

Pembahasan Contoh Aplikasi

Carepol : Air Pollutant Monitoring System

- Juara 1 Nasional , Internet of Things Development , 2017
- Finalis 5 besar Nasional , Microsoft Imagine Cup 2018
- Finalis 5 Besar Nasional BOSCH Hackaton 2019



<http://polusi.id/>

Bidang Pertanian (Smart Farming System)

<http://farming.agusmulyana.net>

adminix

Online

MAIN NAVIGATION

Dashboard

Pengguna

Tanaman

Stok Alat

Alat User

Mulai Penanaman

Panen

Perawatan

Profile

E-FARMING

Dashboard

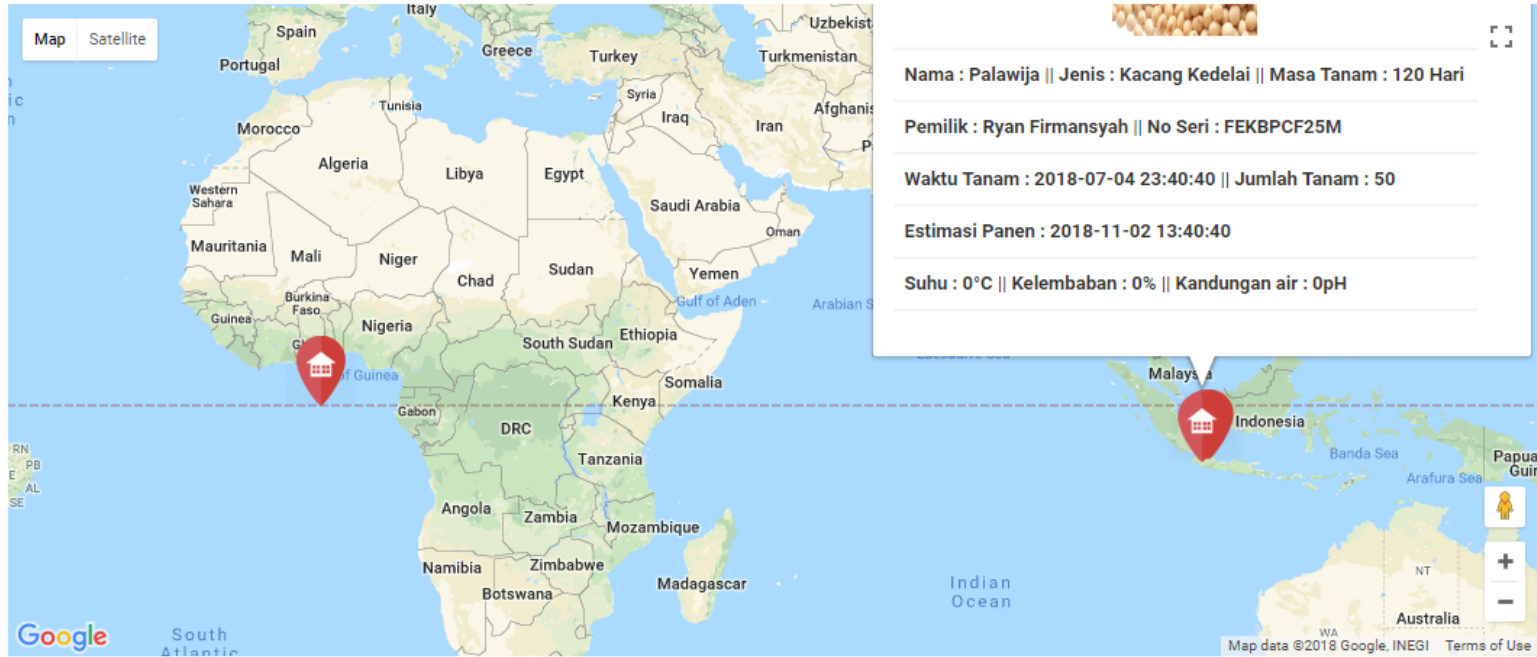
Control panel

Home > Dashboard

Pengguna E-Farming

Map

Satellite



Google



Nama : Palawija || Jenis : Kacang Kedelai || Masa Tanam : 120 Hari

Pemilik : Ryan Firmansyah || No Seri : FEKBPCF25M

Waktu Tanam : 2018-07-04 23:40:40 || Jumlah Tanam : 50

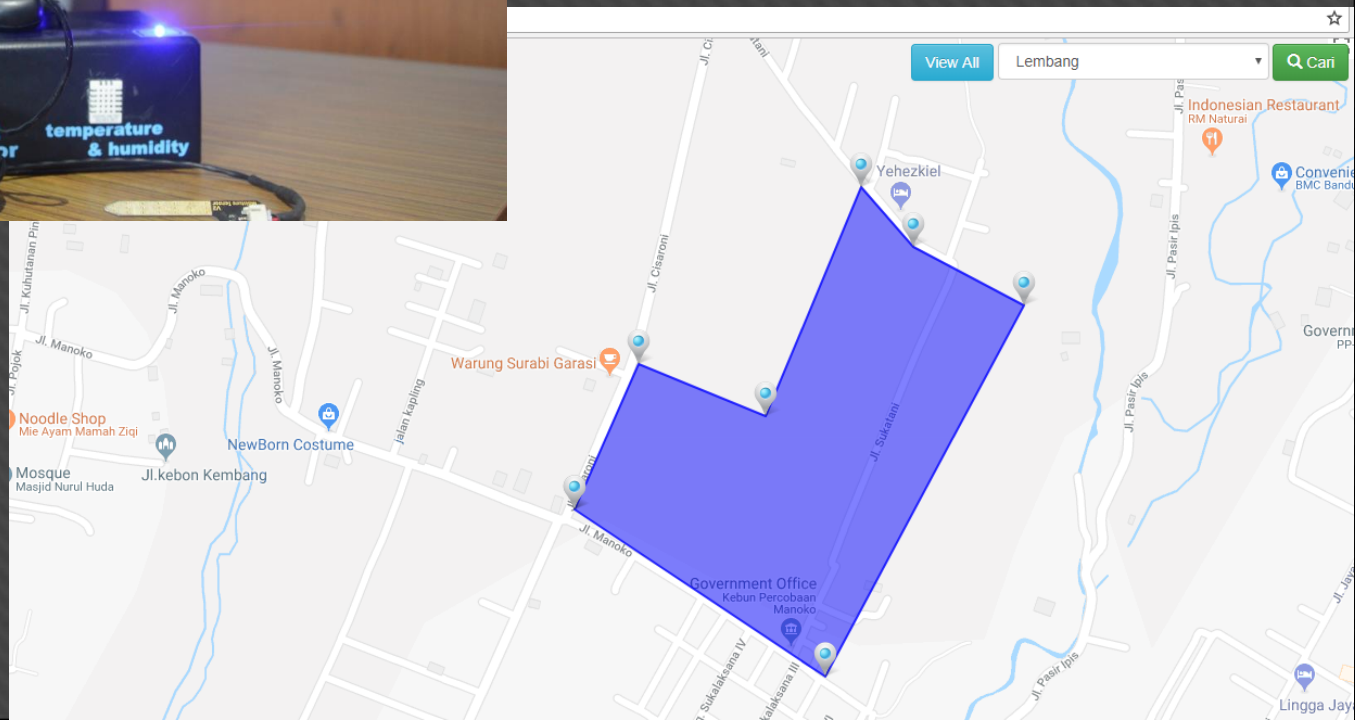
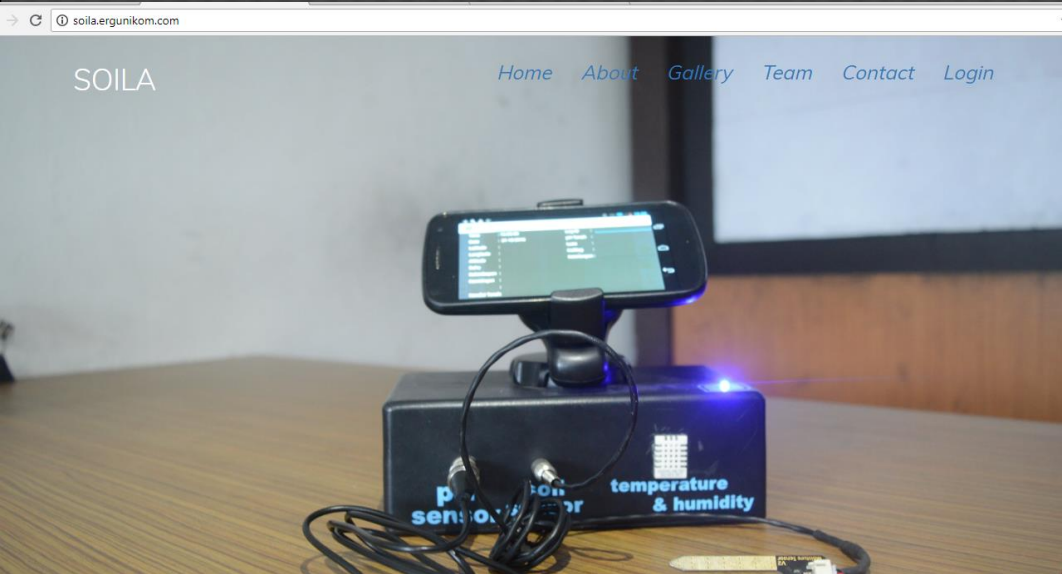
Estimasi Panen : 2018-11-02 13:40:40

Suhu : 0°C || Kelembaban : 0% || Kandungan air : 0pH

Bidang Pertanahan dan Survey Tata Ruang

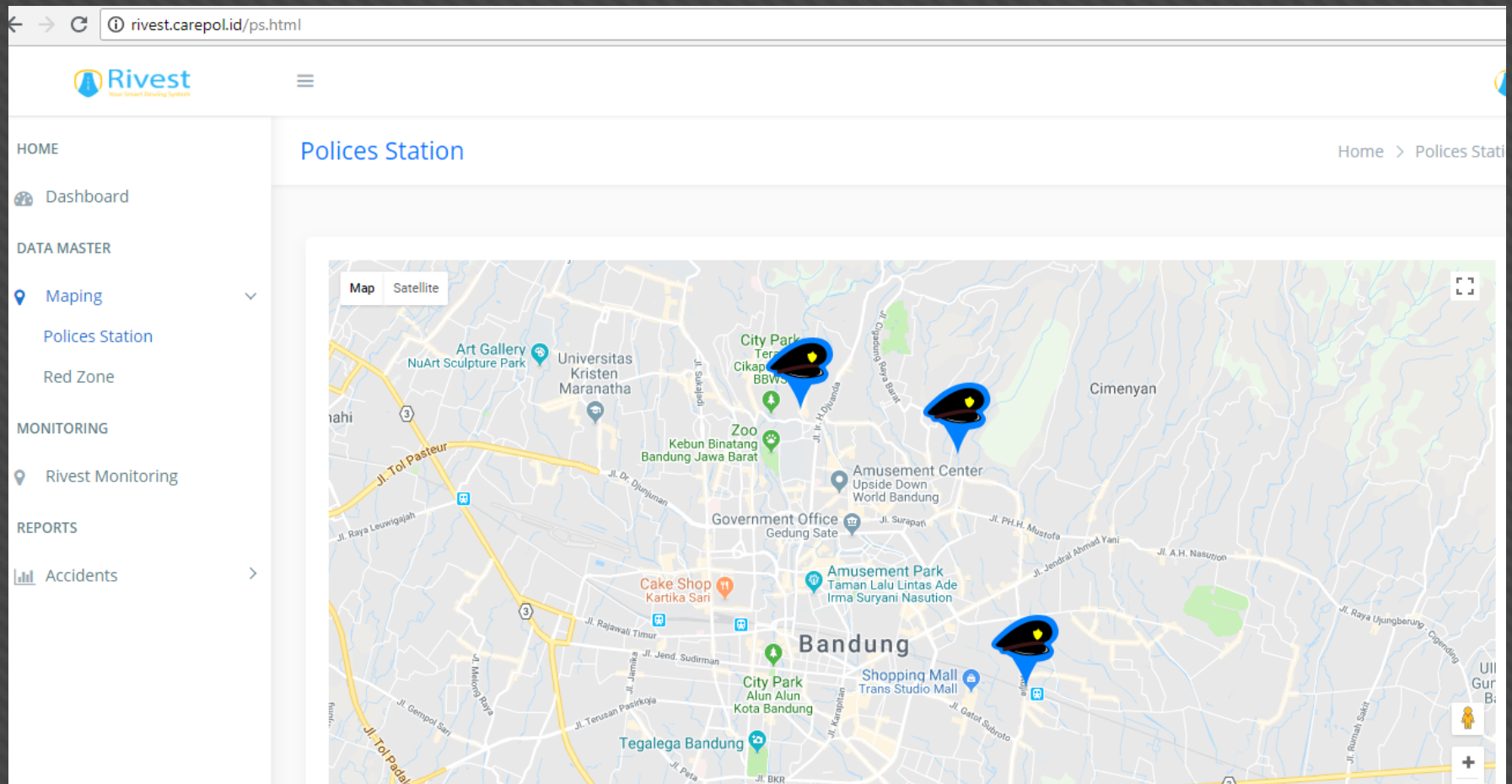
Soila : Sistem survey lahan terpadu dengan Pemetaan

Mendapatkan hibah Paten Produk, BP3IPTEK Jawa Barat 2018



Rivest : Sistem terpadu untuk keamanan dan keselamatan berkendara

- Juara 1 Nasional Internet of Thing Development, TBIG , Kategori : Smart transportation and Logistic
- Juara 3 Nasional IEEE Electronics Design Contest 2016



Demo

- » IoT dari perspektif praktis
- » Platforms yang digunakan untuk bagian Embedded system, Cloud dan Apps (Android)
- » Pengiriman data dari perangkat ke Cloud (Tele Metry)
- » Data analytic di Cloud dengan Matlab Analysis
- » Visualisasi data
- » Pengontrolan perangkat dari Cloud (Tele Command)

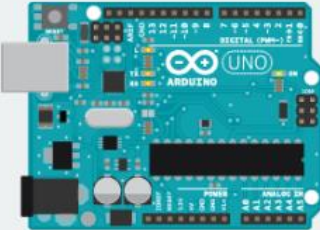
Platforms Embedded System (<https://www.arduino.cc/>)

stem - ThingSpeak IoT x Dashboard x Contact | Agus Mulyana x Virtuino - Apps on Google Play x Arduino - Home x

Secure | <https://www.arduino.cc>



WHAT IS ARDUINO?

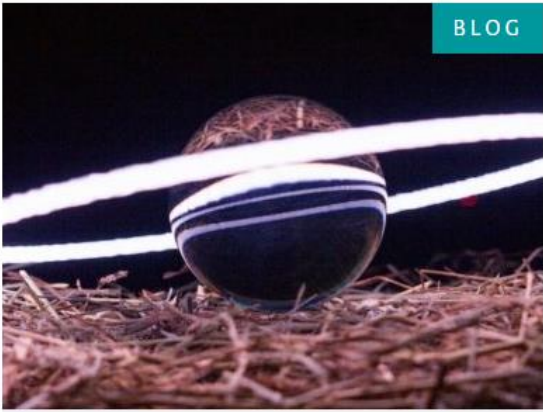


BUY AN ARDUINO

LEARN ARDUINO

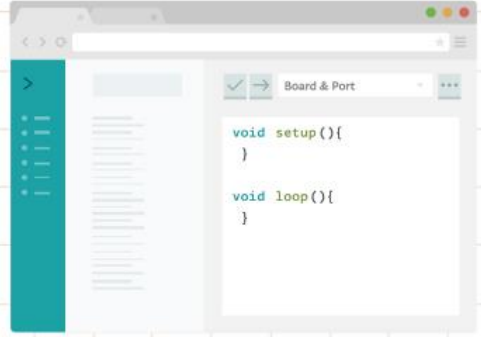
DONATE

BLOG



LIGHT PAINTING RIG IS A MASTERPIECE OF ARTISTIC HARDWARE HACKING

> ARDUINO
> WEB EDITOR
> CODE ONLINE!

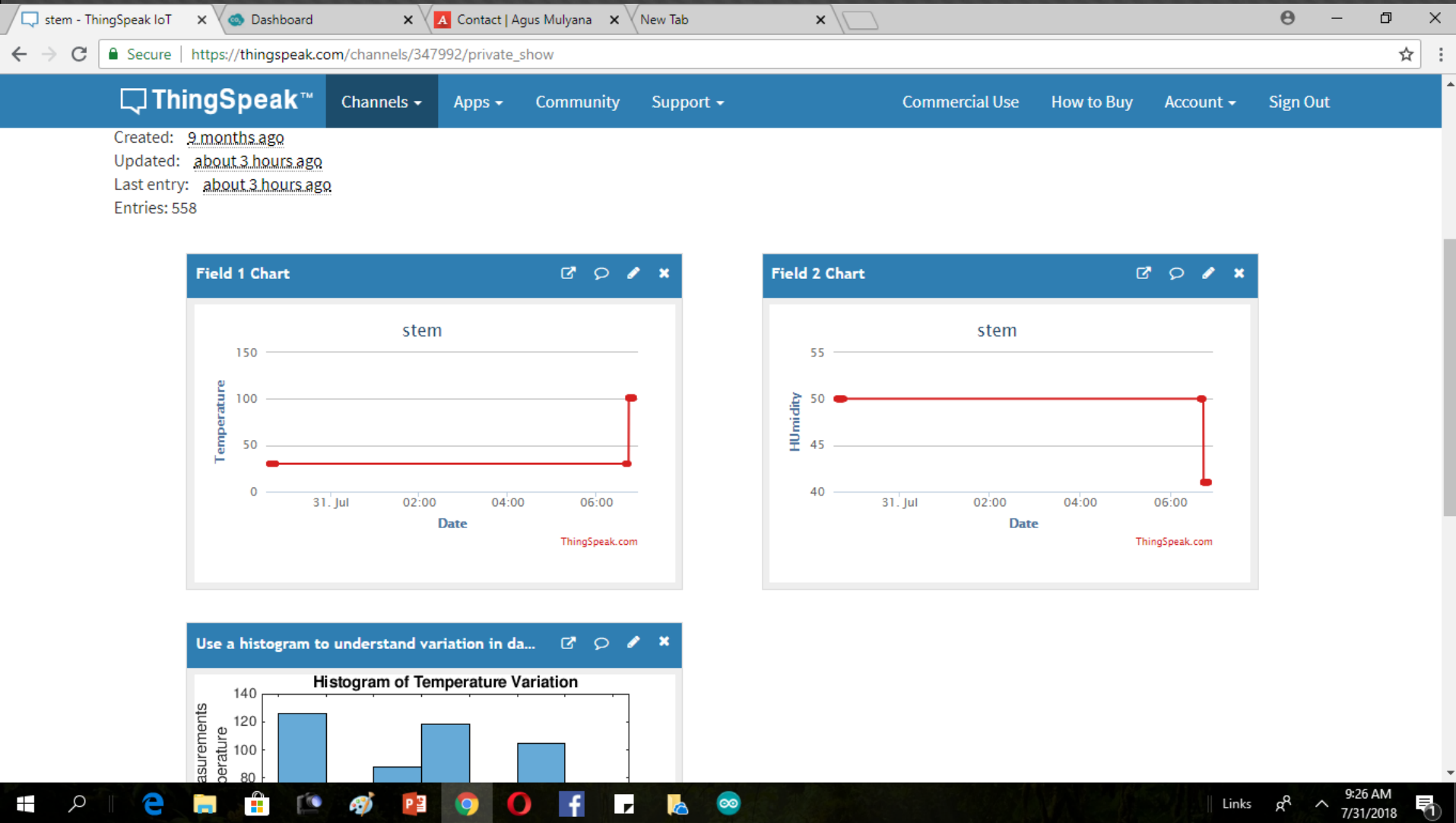


```
void setup(){  
  }  
  
void loop(){  
  }  
}
```

<https://www.arduino.cc>

Windows taskbar: 9:29 AM 7/31/2018

Platforms Web (<https://thingspeak.com>)



Platforms Apps Android

(https://play.google.com/store/apps/details?id=com.virtuino_automations.virtuino)

The screenshot displays the Google Play Store interface on a desktop browser. The address bar shows the URL https://play.google.com/store/apps/details?id=com.virtuino_automations.virtuino. The Google Play logo is in the top left, and a search bar is in the top center. The left sidebar contains navigation options: Apps, My apps, Shop, Games, Family, Editors' Choice, Account, My subscriptions, Redeem, Buy gift card, My wishlist, My Play activity, and Parent Guide. The main content area shows the app page for 'Virtuino' by Ilias Lamprou. The app icon is a yellow square with two gauges and a red button. The app is rated 4.5 stars (1,101 reviews) and is marked as 'Installed'. It offers in-app purchases and is compatible with all devices. Below the app description are three screenshots of the app's interface, showing various data and control screens. To the right, the 'Similar' section lists other apps: 'Reverse Image Search', 'Samsung Max - Max apps', and 'Copy My Data Media Mushroom'. The Windows taskbar is visible at the bottom with various application icons and the system clock showing 9:27 AM on 7/31/2018.

stem - ThingSpeak IoT x Dashboard x Contact | Agus Mulyana x Virtuino - Apps on Google Play x

Secure | https://play.google.com/store/apps/details?id=com.virtuino_automations.virtuino

Google Play Search

Categories Home Top Charts New Releases

My apps Shop Games Family Editors' Choice Account My subscriptions Redeem Buy gift card My wishlist My Play activity Parent Guide

Virtuino
Ilias Lamprou Tools
★★★★★ 1,101
3+
Offers in-app purchases
This app is compatible with all of your devices.
Installed

Similar See more

Reverse Image Search
THINK FREE
Find similar images or pictures using Google Reverse Search instead of
★★★★★

Samsung Max - Max apps
Save data, scan for risks, protect your privacy, and manage your favorite
★★★★★

Copy My Data Media Mushroom
The easy way to copy

Windows taskbar: 9:27 AM 7/31/2018

THANK YOU!

**“Innovation distinguishes
between a leader and a
follower.”**

- Steve Jobs