TESA

TESA TOP GUN RALLY

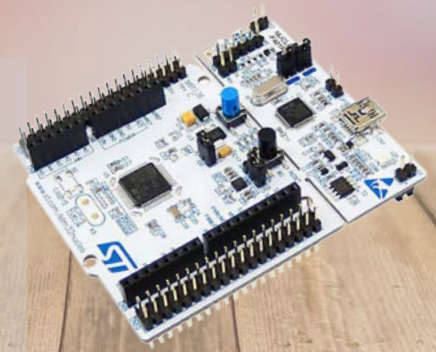
Hoykhom

King Mongkut's Institute of Technology Ladkrabang

HEROKU

Flask
web development, one drop at a time

PostgreSQL



HEROKU
Flask
web development,
one drop at a time
PostgreSQL
LINE

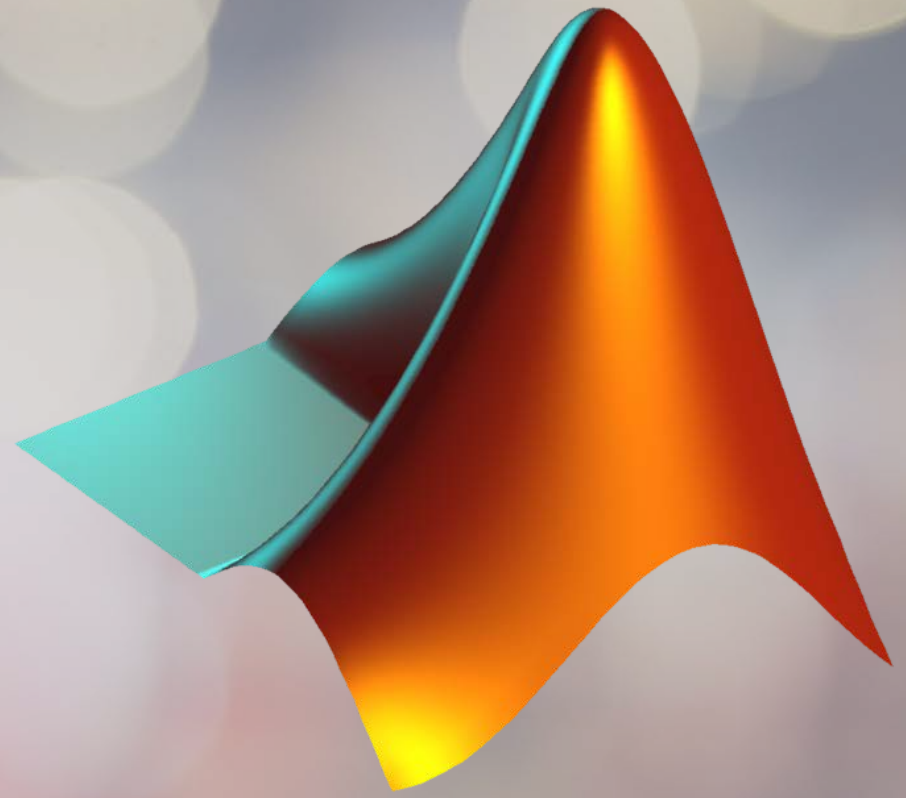
Push and reply

HEROKU

Flask
web development,
one drop at a time

PostgreSQL

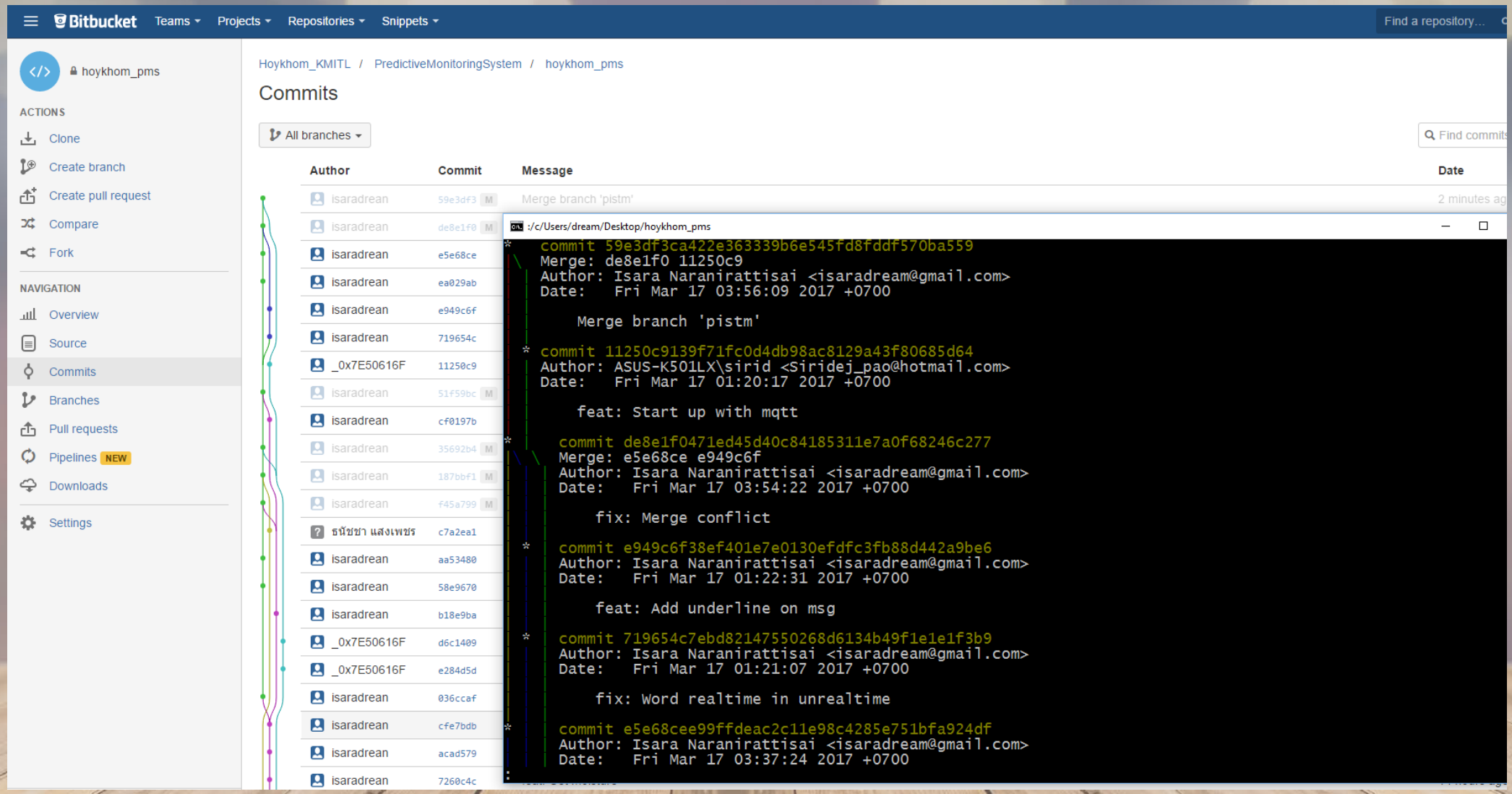
Data Analytics



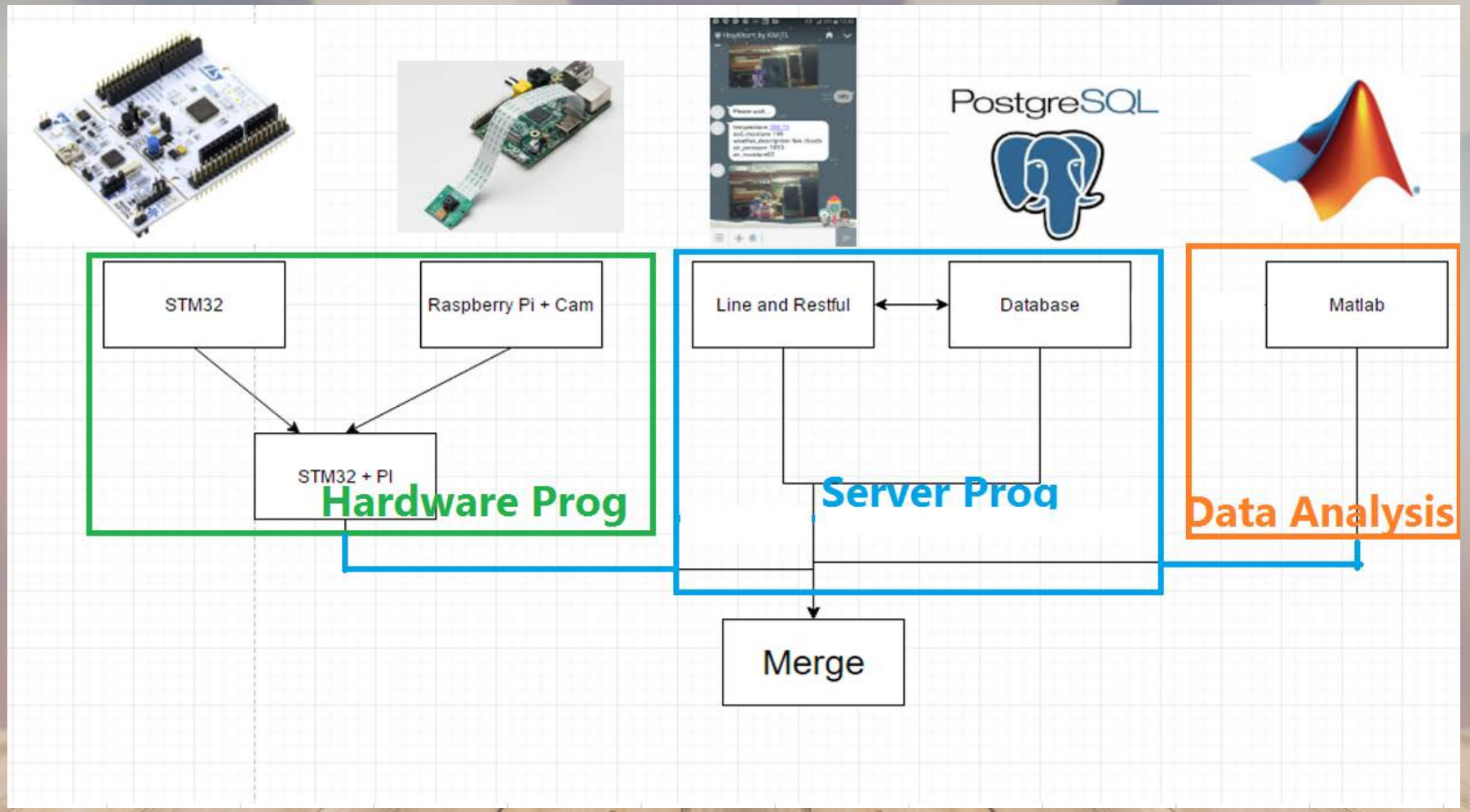
Teamworks!

Teamworks! (1)

GIT <Bitbucket>



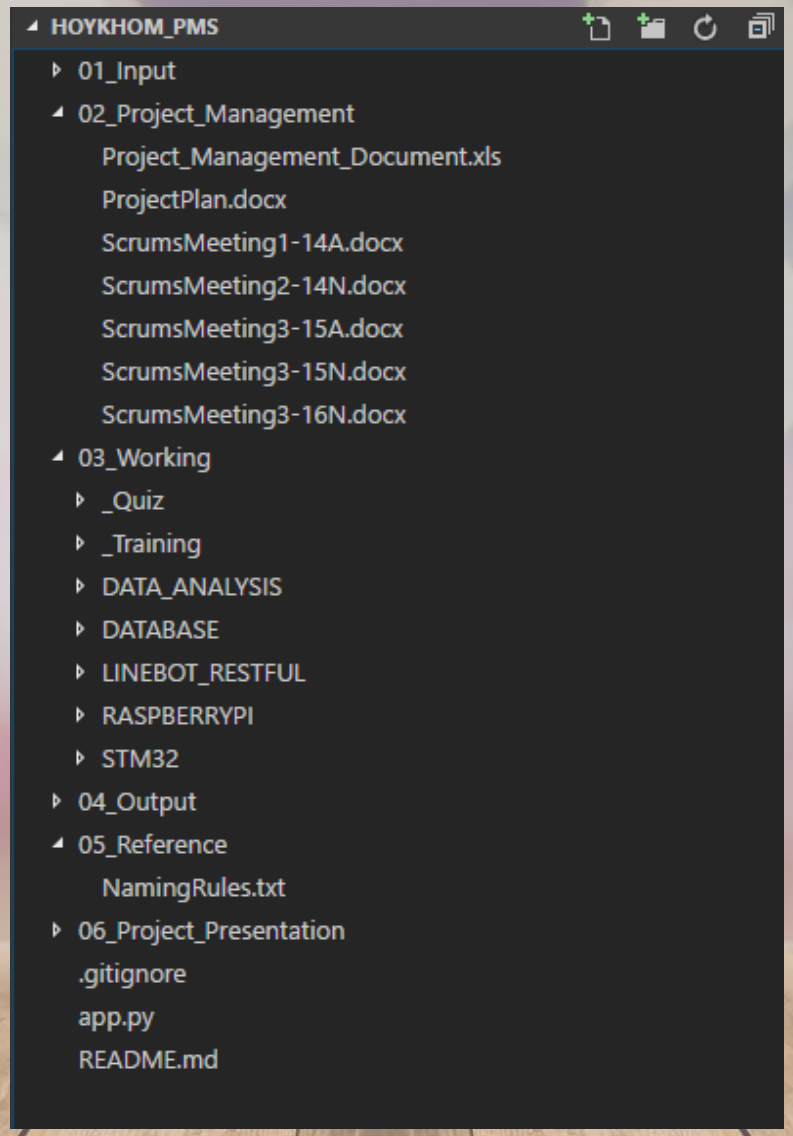
System Integration Strategy



Naming Rules

```
Filename:
    Source Code:
        {Device or Module}_{Function}.{Extension}
        ex.
            Stm32_ReadMoisture.c

        *If that source code is main/core file use
            main.{Extension} or app.{Extension}

    Others:
        {Description}.{Extension}
        ex.
            README.md

    GIT:
        .git and .gitignore

    Scrume Meeting Log:
        on "02_Project_Management" dir
        ScrumsMeeting{Number of Meeting}-{day}{A | N}.docx

        {A | N} is 'A'fternoon or 'N'ight


Commit Message:
    "{Option}: {msg}"

    Option:
        docs:      Documents
        style:     Style code to more readable (space, PEP8) but don't change code
        feat:      Features
        fix:       Fix bug or any problem
        refactor:  Refactor code
        test:      Add test
        add:       Just Add file or dir
    msg:
        - start with Uppercase(only 1st charactor) and then lowercase
        - Recommend verb + noun
```

Directory Structure



Working Breakdown Structure

Work Breakdown Structure and Schedule

Gantt Chart(Work Breakdown Structure): (AN:Afternoon, NI:Night)

WBS		02/1 - 03/12	03/13		03/14		03/15		03/16		03/17	
Tasks	PIC (name)		AN	NI	AN	NI	AN	NI	AN	NI	AN	Ni
Pi & STM	N, PA											
-Learning	N, PA											
-Development	N, PA											
-Pi&STM Integration	N, PA											
-Testing	N, PA											
SERVER	D											
Learning Linebot												
-Developing Line Bot	D											
-Testing	D											
-Deploy to server	D											
-Design&Create DB	D											
-RESTful API	D											
Matlab												
-develop check size durian & Testing	P											
-GUI in matlab & Testing	P											
-check count and desease durian	P											
-integration matlab program and fix bug	P											
-kmean clustering	E											

-import and export database	E											
-Statictical visualization	E											
-Hypothesis Testing -box plot												
INTEGRATE	S_Team, H_Team, D_Team											
Integrate	S_Team, H_Team, D_Team											
Testing	S_Team, H_Team, D_Team											
MONITORING	D											
-Daily Meeting	D											
-Team planing	*											

Project Issues

Project Issues

Hoykhom, KMITL

Sponsored by:

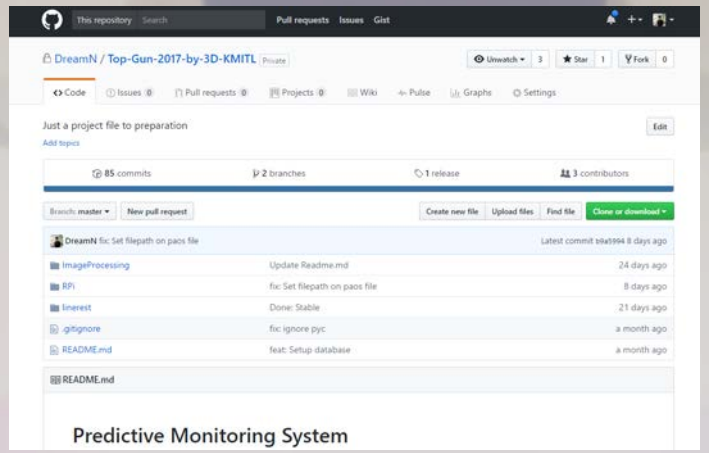
No.	Date	Issue Description	Corrective Action	PIC	Status
001	2017/03/14	Deploy Flask on heroku and Connect DB	use psycopg2	D	Close
002	2017/03/14	Matlab GUI predict weather	Learning	PE, E	Close
003	2017/03/14	Create task by tros	Done	PA, N	Close
004	2017/03/15	Integrate STM32 and RPi (Communicate) using UART (protocal: mod bus).		PA, N	Close
005	2017/03/15	Line get data from 'Wunderground' API and commit to PostgreSQL database	use psycopg2 and wunderground api	D, PE	Close
006	2017/03/15	Restful + Line	use webhook	D	Close
007	2017/03/15	Pi + Camera + local database	Done	PA	Close
008	2017/03/15	Matlab get data from restful database		D, PE	Close
009	2017/03/15	create scheduler for bot to get weather		D	Close
010	2017/03/15	Realtime get weather		D	Close
011	2017/03/15	Raspberry Pi Post file to server		P	Close
012	2017/03/15	Matlab calculate data from db	jsonify	PE, E	Close
013	2017/03/15	Matlab commit processes file	call python	D, PE, E	Close
014	2017/03/15	Presentation		D	Close
015	2017/03/15	More Predictive (durian quality)	machine learning	PE, E	Close
016	2017/03/15	Send Graph to user	Delete Issue	D, PE	Close
017	2017/03/15	Optimize stm32 and RPi (speed and reliability)		PA, N	Close
018	2017/03/16	Matlab send file	call python	D, PE, E	Close
019	2017/03/16	Line Realtime get weather	use mqtt	D, PA	Close

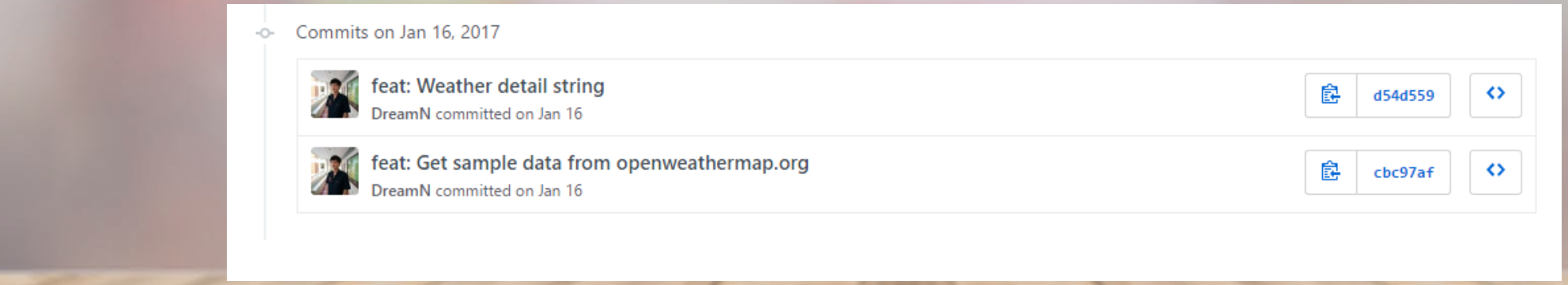
Before the competition

Because It's our 1st time

for TESA Top Gun Rally…

We’re practice so hard!





Over 80+ commits on github

Chuck Cobb, Agile Project Management Author, Mentor, and Instructor

Written Aug 23, 2016

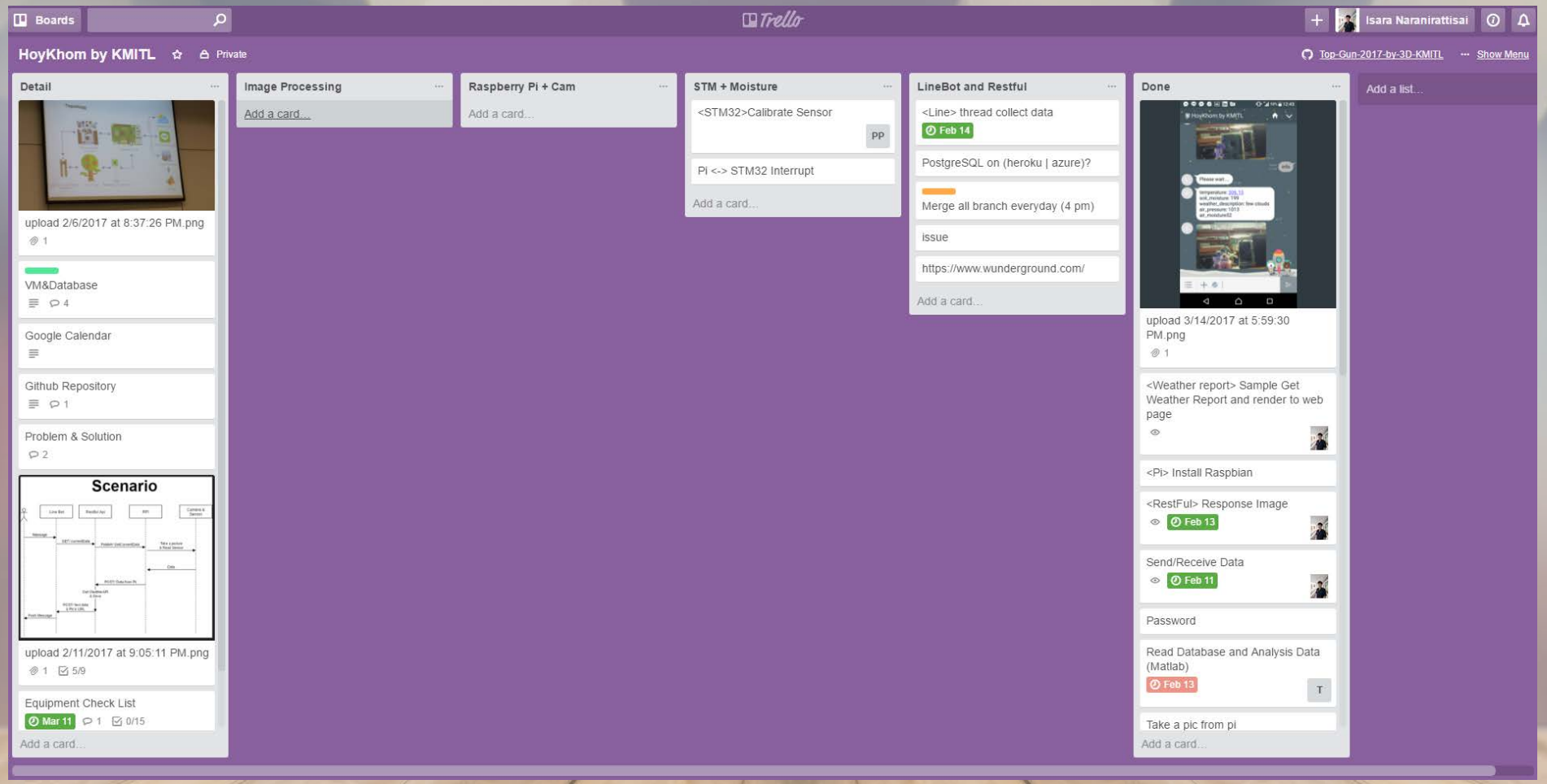
It totally depends on the nature of the project. Many people might argue that Agile is the best methodology for software development and it does have significant advantages in most cases; however, saying "Agile is better than Waterfall" is like saying "A car is better than a boat". They both have advantages and disadvantages depending on the environment.

Agile/Scrum works best with projects that have high levels of uncertainty and require an adaptive approach. A plan-driven approach (what many people loosely call "Waterfall") works best in situations where the requirements are fairly certain and there is some need for predictability of project costs and schedules. And, of course, that is not meant to imply that there is a binary and mutually-exclusive choice between two extremes. There are many ways to blend an adaptive (Agile) approach with a plan-driven approach in the right proportions to fit the situation.

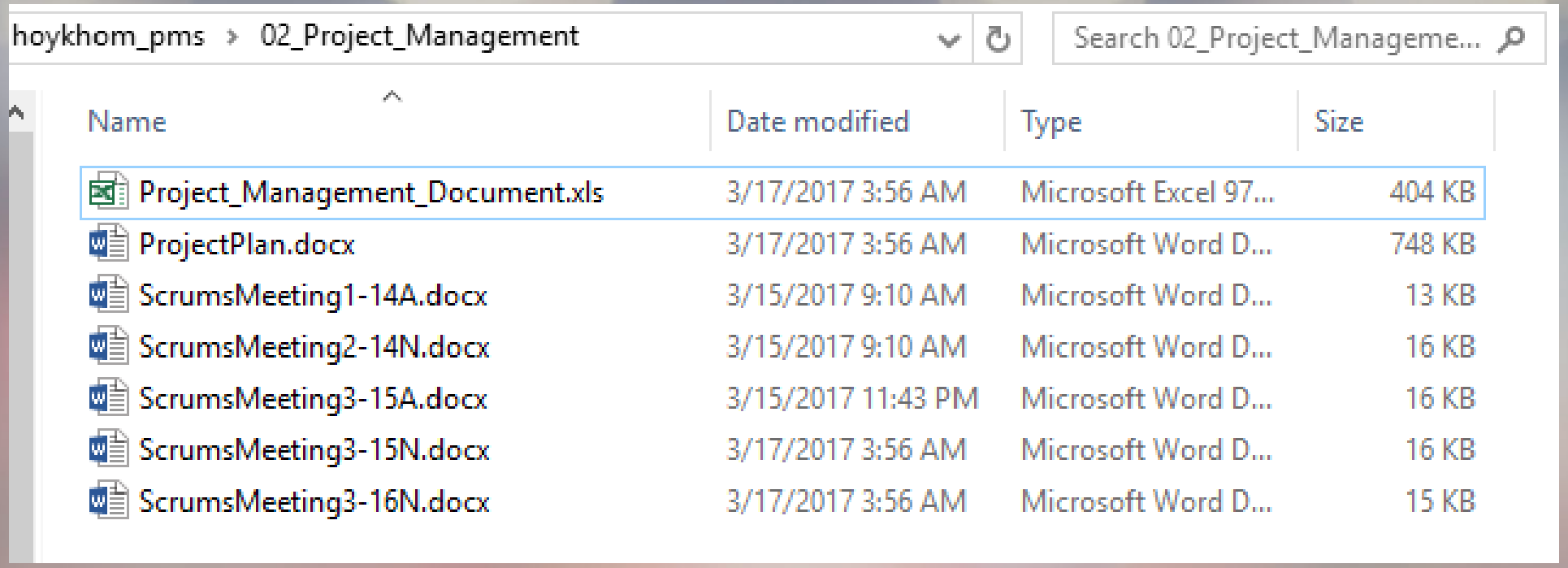
There is no "silver bullet" methodology that fits all possible projects and the right solution is to fit the methodology to the nature of the problem rather than force-fitting a project to some predefined methodology.

Chuck Cobb
Author of "The Project Manager's Guide to Mastering Agile"
Check out: Agile Project Management Academy
(http://agileprojectmanagementaca...)

Trello


Boards
Trello
Isara Naranirattisai
HoyKhom by KMITL
Private
Top-Gun-2017-by-3D-KMITL
Show Menu
Detail
upload 2/6/2017 at 8:37:26 PM.png
1
VM&Database
4
Google Calendar
Github Repository
1
Problem & Solution
2
Scenario
upload 2/11/2017 at 9:05:11 PM.png
1
5/9
Equipment Check List
Mar 11
1
0/15
Add a card...
Image Processing
Add a card...
Raspberry Pi + Cam
Add a card...
STM + Moisture
<STM32>Calibrate Sensor
PP
Pi <-> STM32 Interrupt
Add a card...
LineBot and Restful
<Line> thread collect data
Feb 14
PostgreSQL on (heroku | azure)?
Merge all branch everyday (4 pm)
issue
https://www.wunderground.com/
Add a card...
Done
upload 3/14/2017 at 5:59:30 PM.png
1
<Weather report> Sample Get Weather Report and render to web page
<Pi> Install Raspbian
<RestFul> Response Image
Feb 13
Send/Receive Data
Feb 11
Password
Read Database and Analysis Data (Matlab)
Feb 13
T
Take a pic from pi
Add a card...
Add a list...

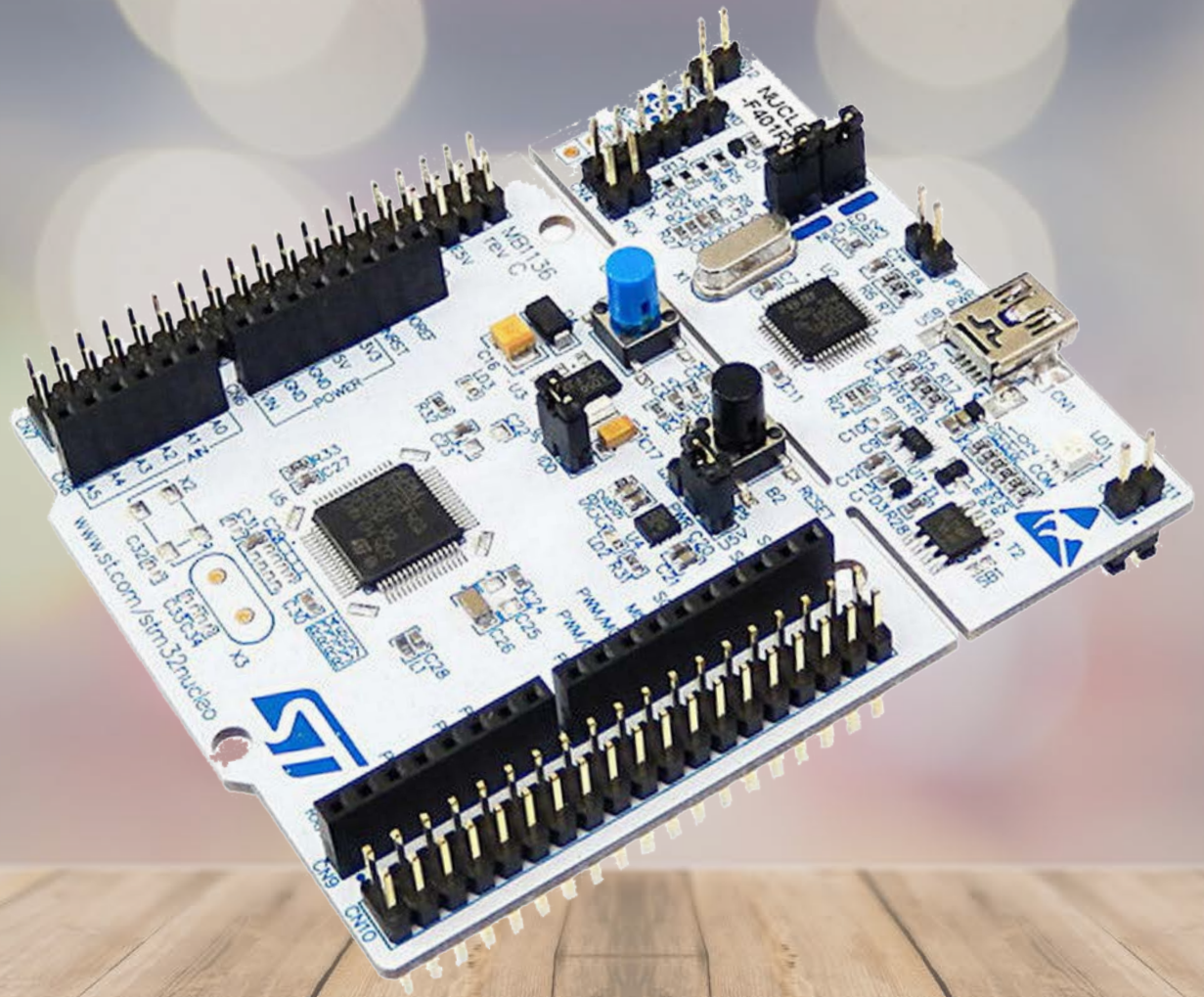
We talk 2 times a days



But we haven't
done yet...

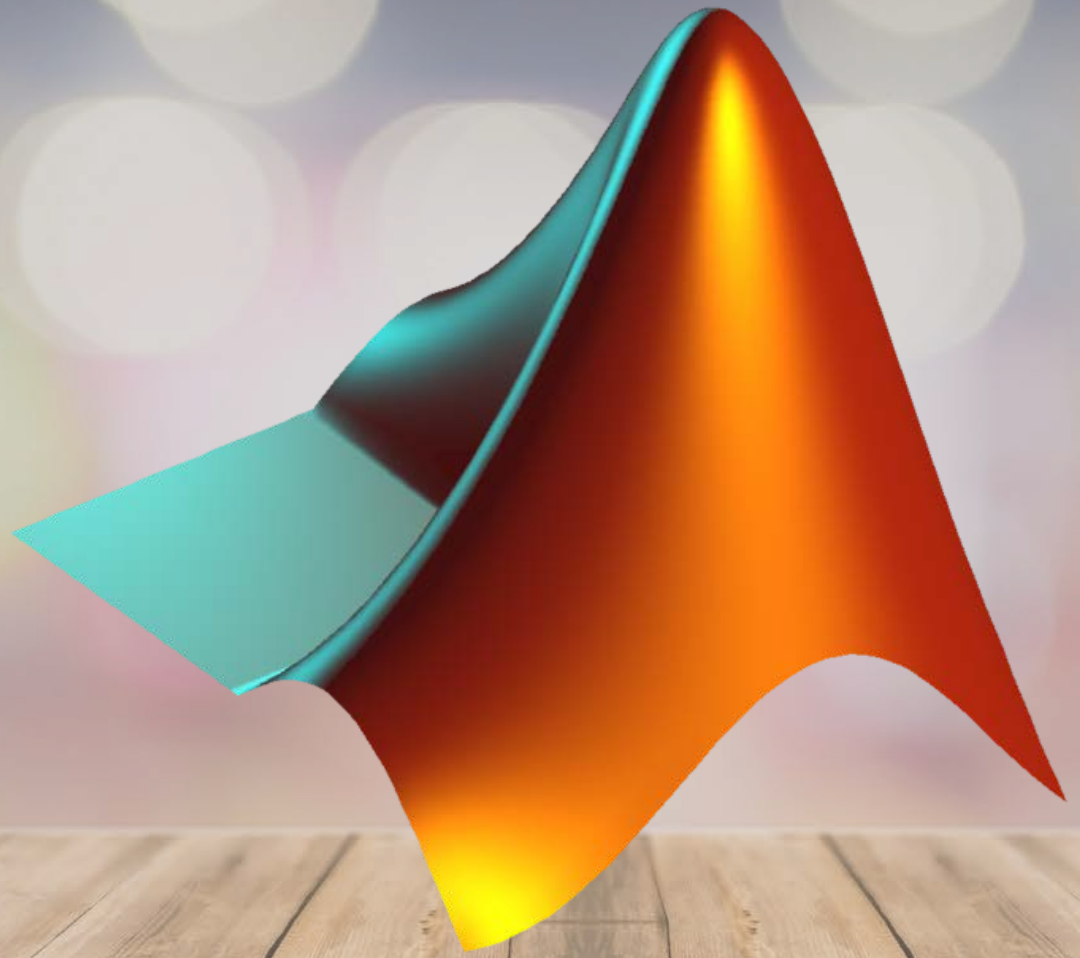
Problem Analysis

Why STM32?



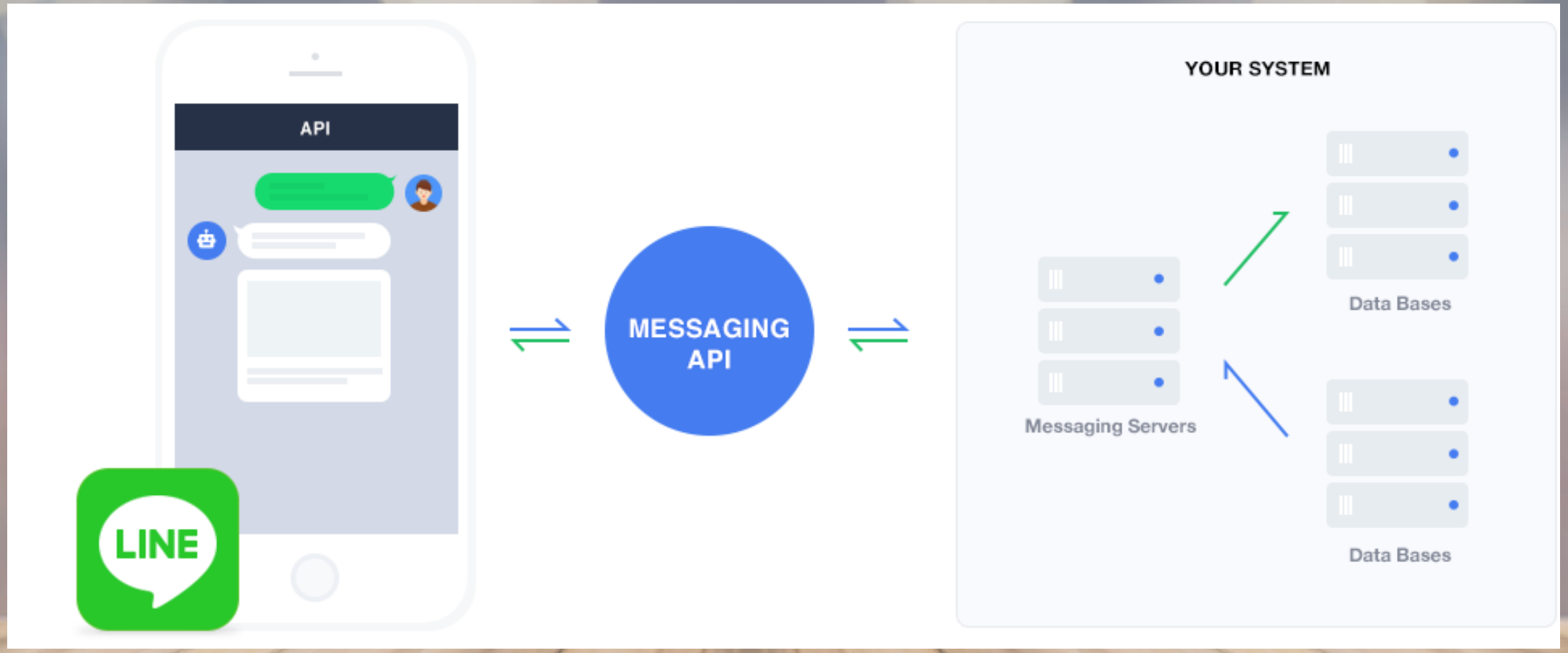
Why Raspberry Pi 3 ?

Why Matlab?

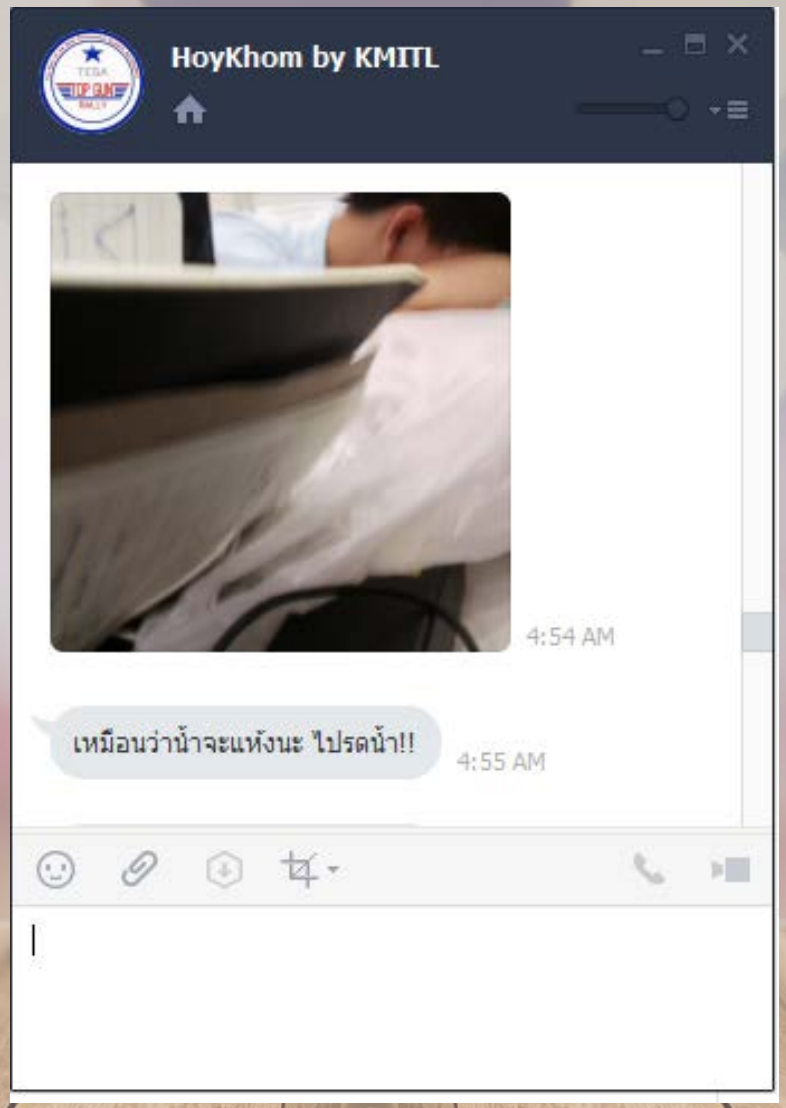


Why Heroku, Flask and psql?

Why Line Bot API?



Why not just a web?



Thank You

TESA
TNI
TESA TOP GUN RALLY
ThaiGerTec
CAT
ThaiEasyElec
DIGITALDIALOGUE
SCG
NIA
DG DESIGN GATEWAY
SAIJO DENKI
DEAWARE
UNI-ARC
ilicon craft
TOYOTA TSUSHO
Celestica
Transcode
xSense
KKT
NDR
ATIZ
TESA TOP GUN RALLY 2017
The Best of The Best on Embedded System Developers
การประชันสุดยอดฝีมือทางด้านระบบสมองกลฝังตัวชิงแชมป์ประเทศไทย ครั้งที่ 11
Predictive Monitoring System
ณ สถาบันเทคโนโลยีไทย-ญี่ปุ่น
12 – 18 มีนาคม 2017