

SNACK WATCHER USING MICROSERVICES

Jonah's Working Group



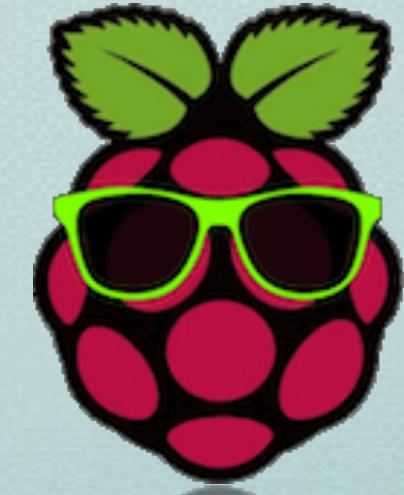
Benny
Cheung



Mark
Bloomer



Randolph
Salvador

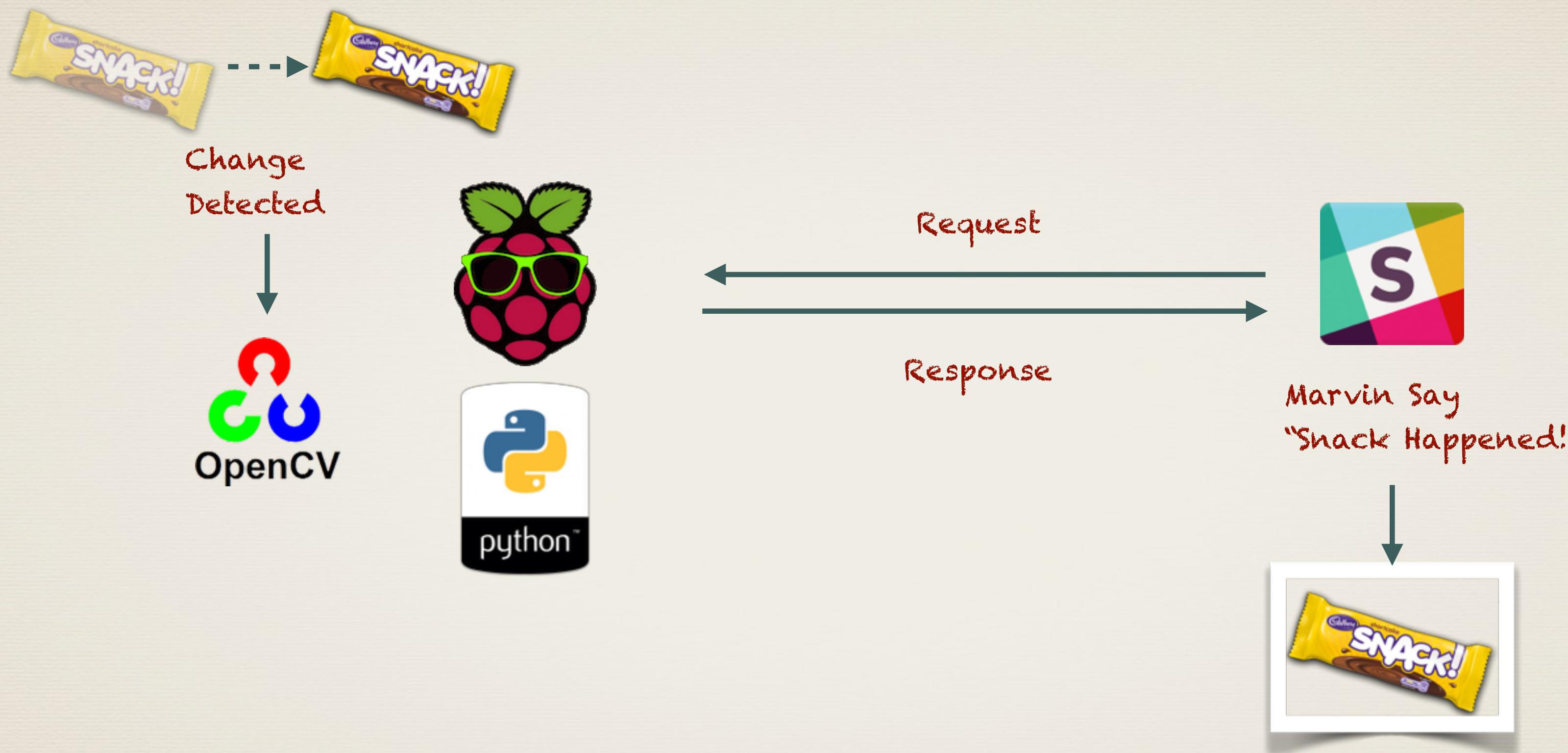


presented by Benny Cheung
June 2016

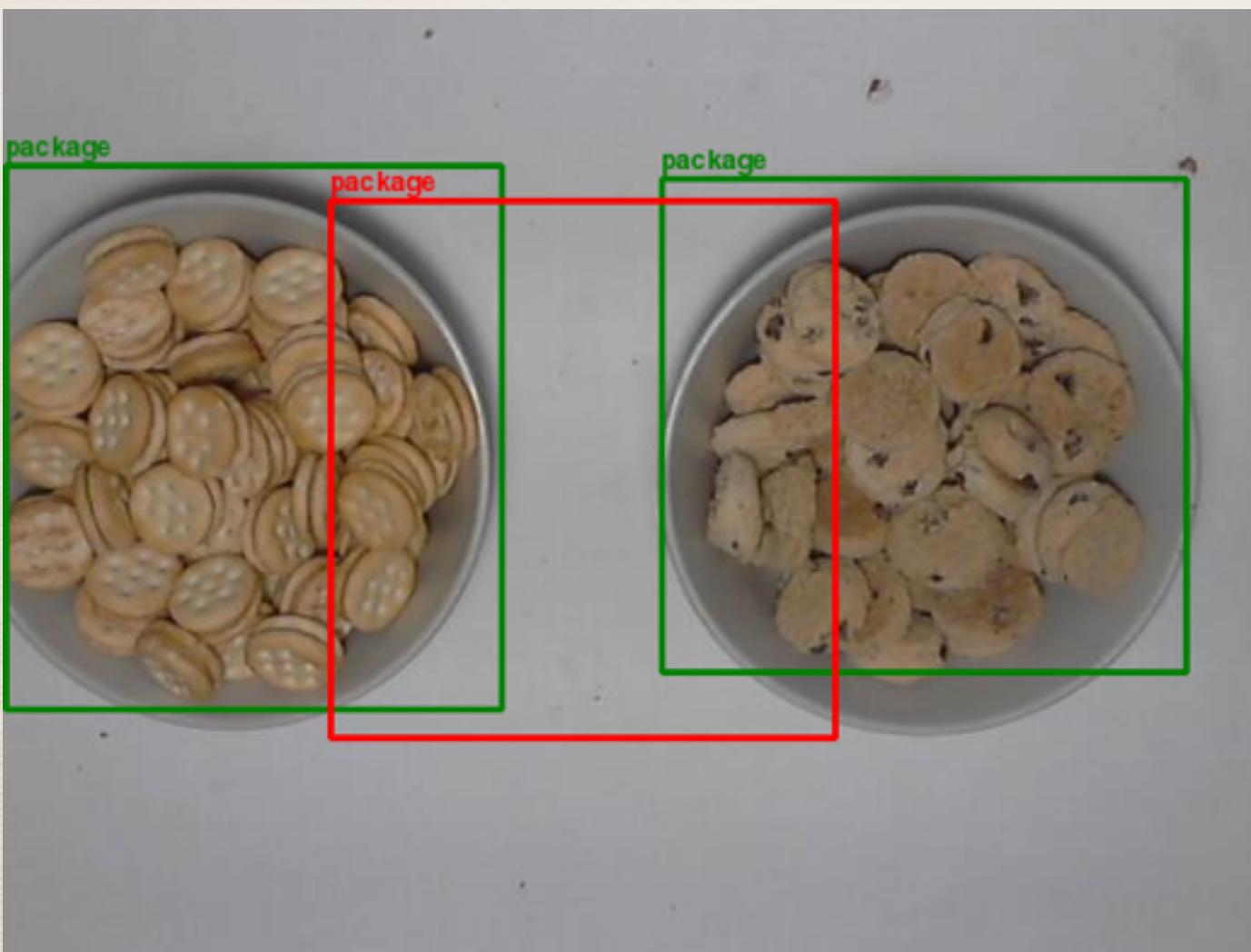
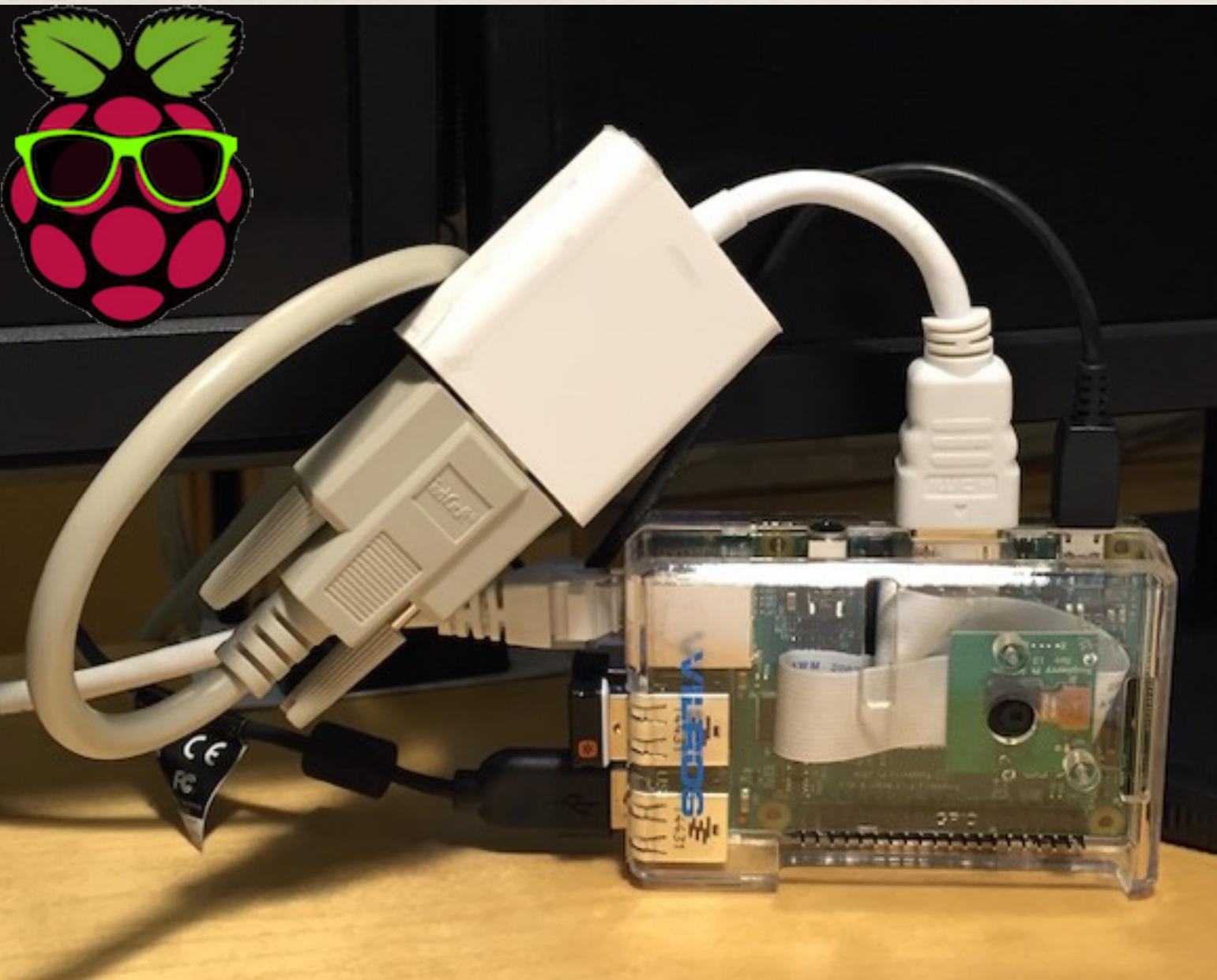


Picture Credit: Game of Thrones

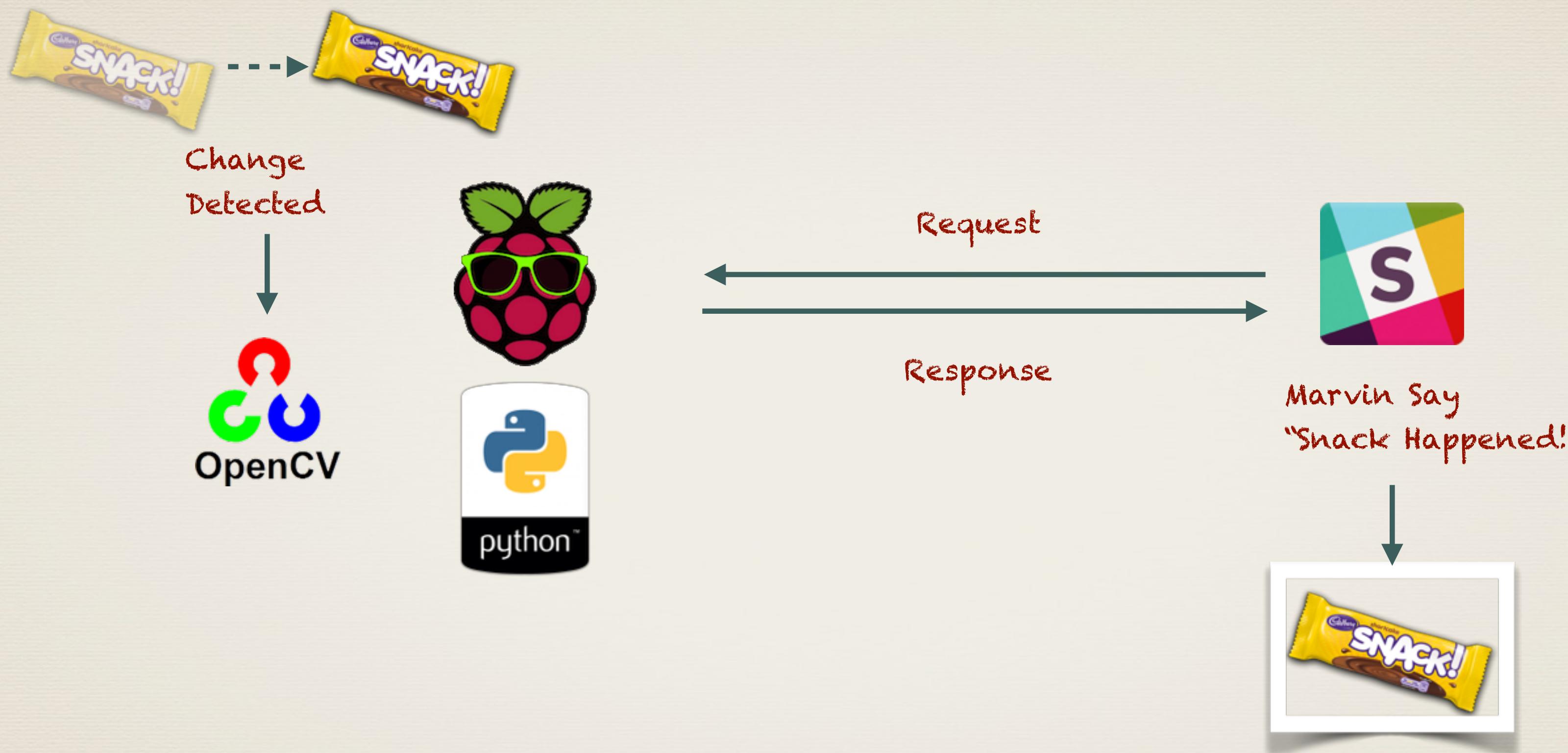
Snack Watching



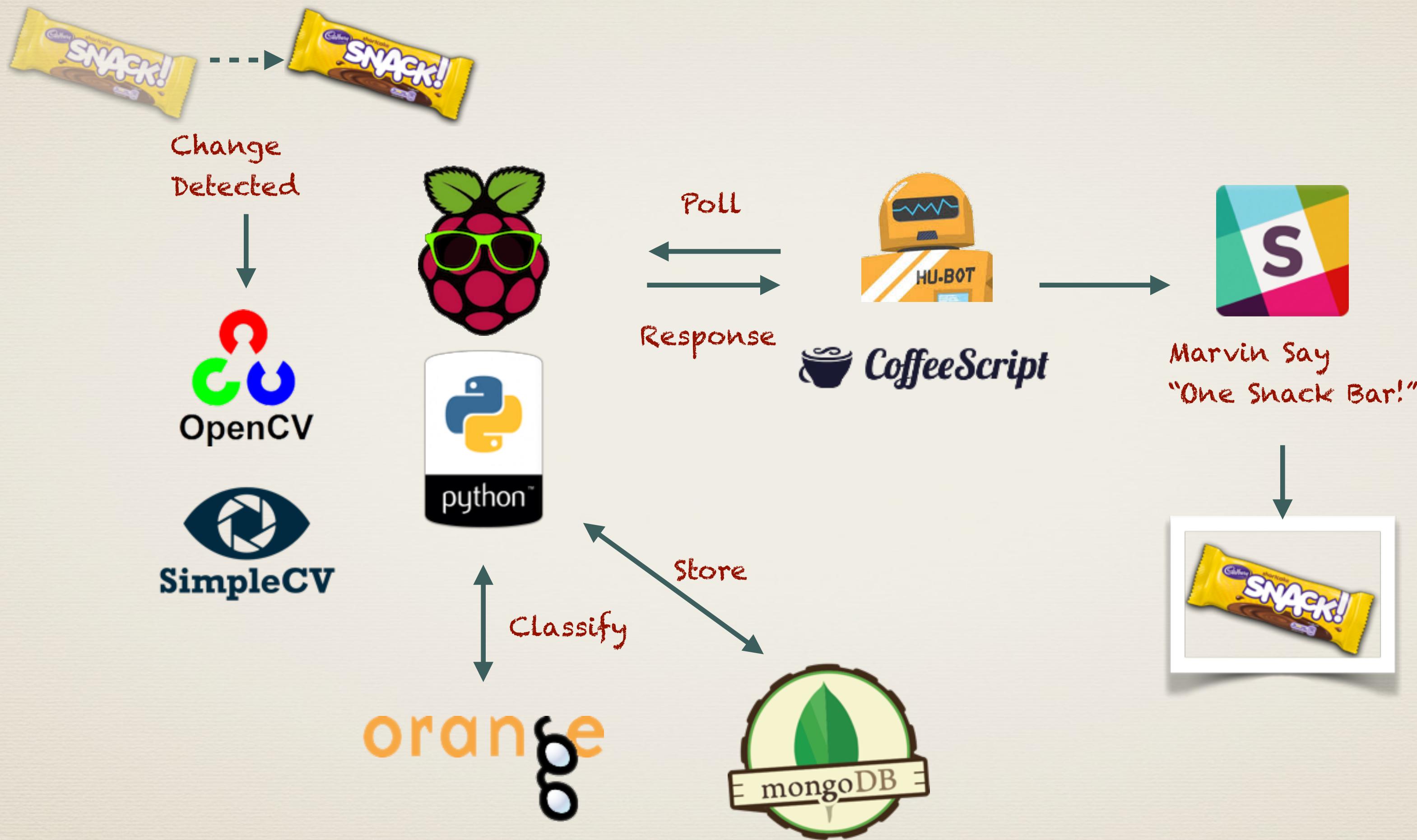
Snack Watcher



Snack Watching



Snack Classifying



Cookie-ness

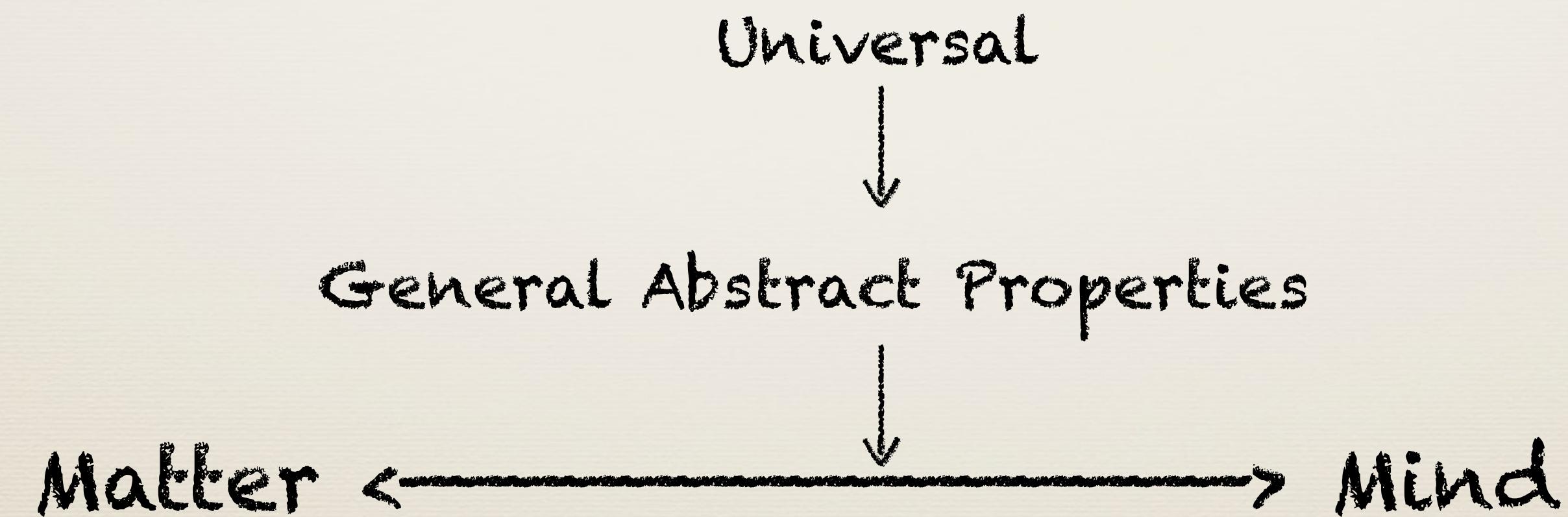
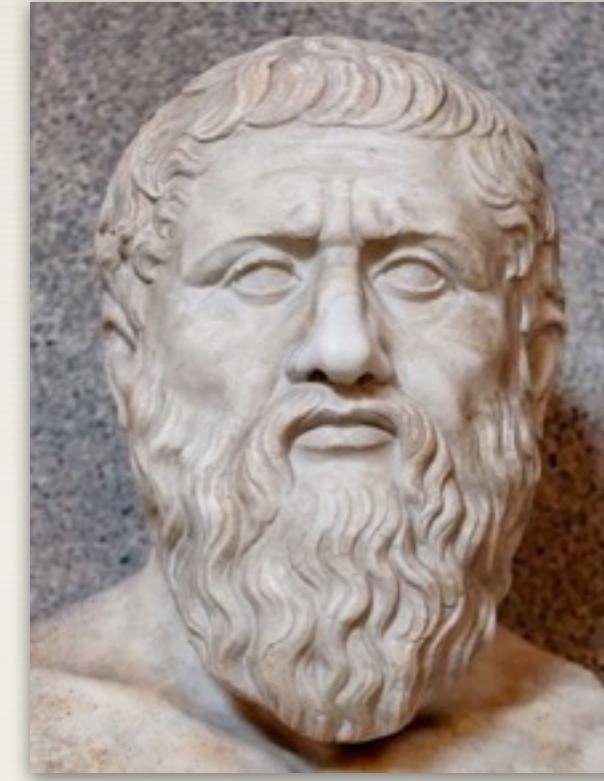
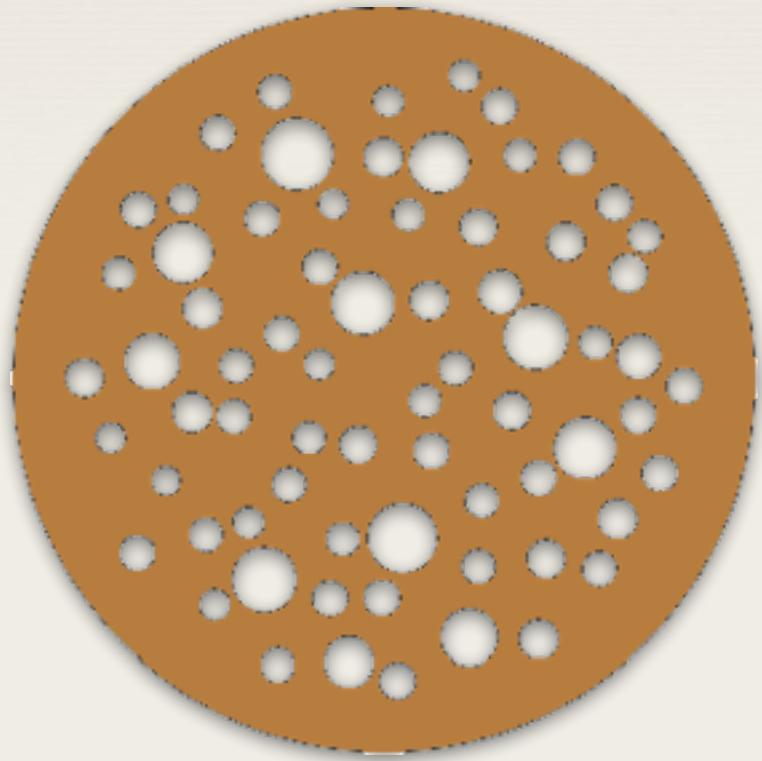


Are You Sure ?

Are You Sure?



Cookie-ness

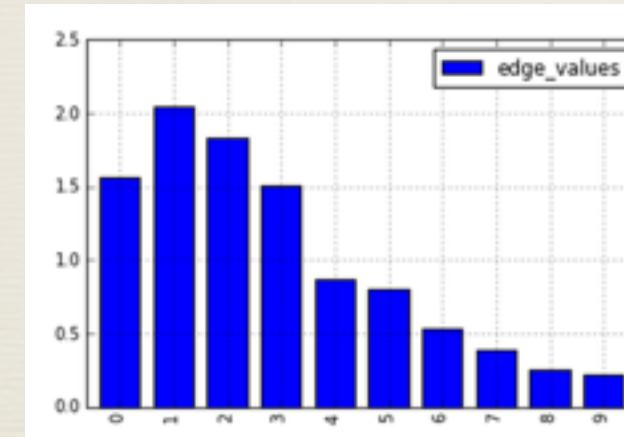


Cookie-ness by Image Processing

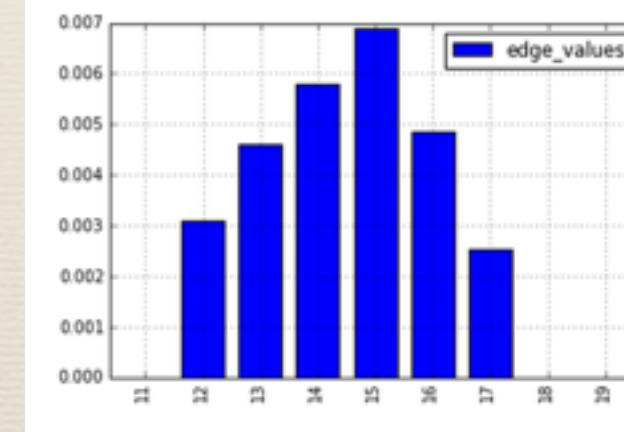


Shape

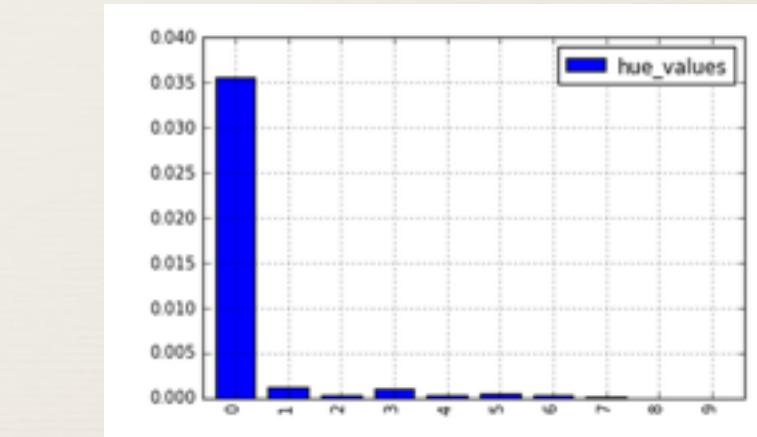
Color



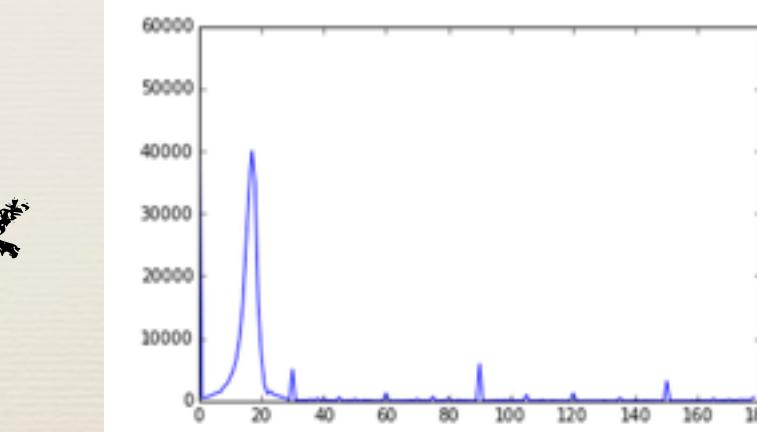
Length



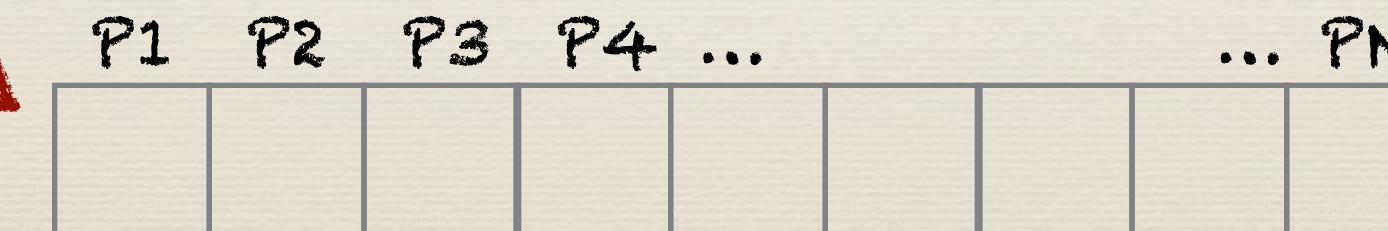
Angle



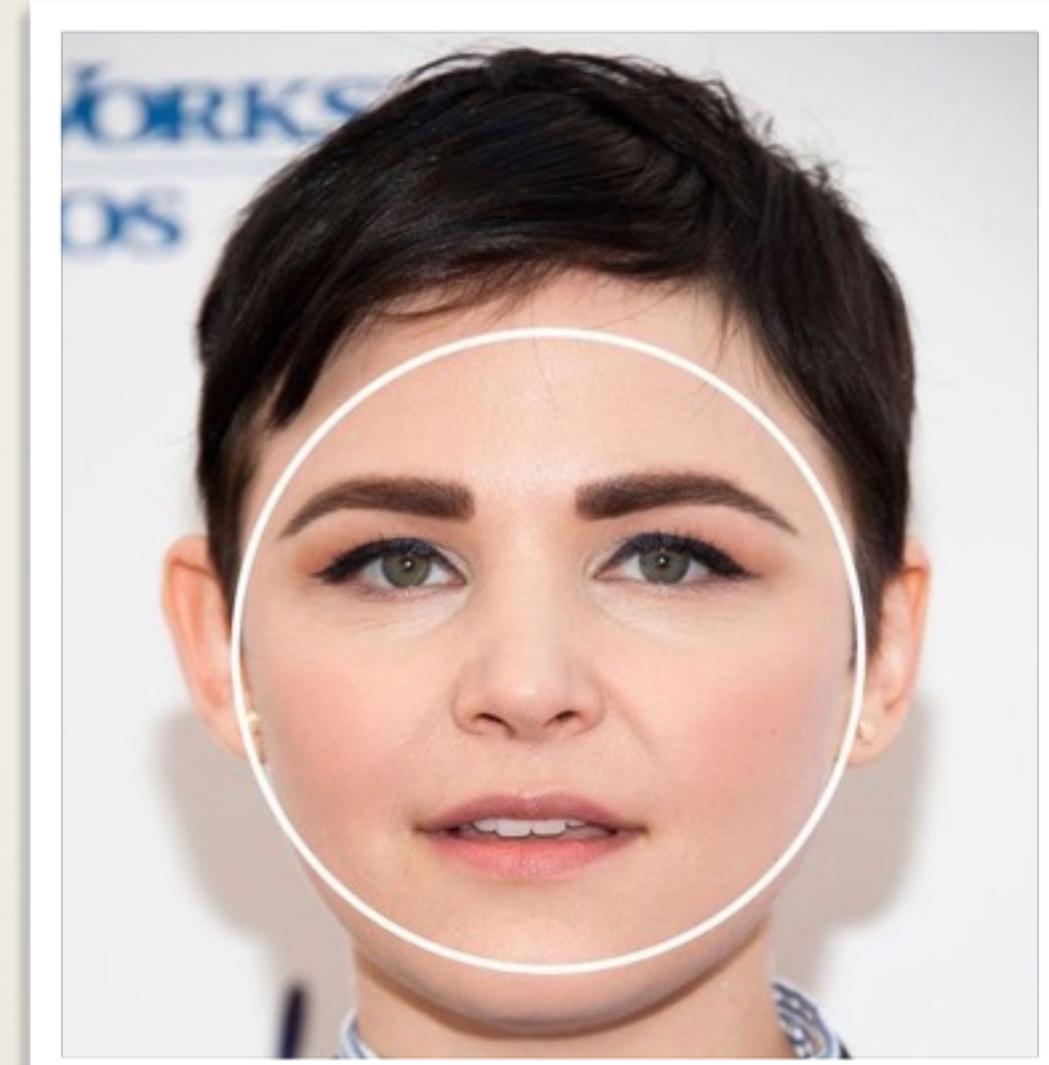
Hue



Peak

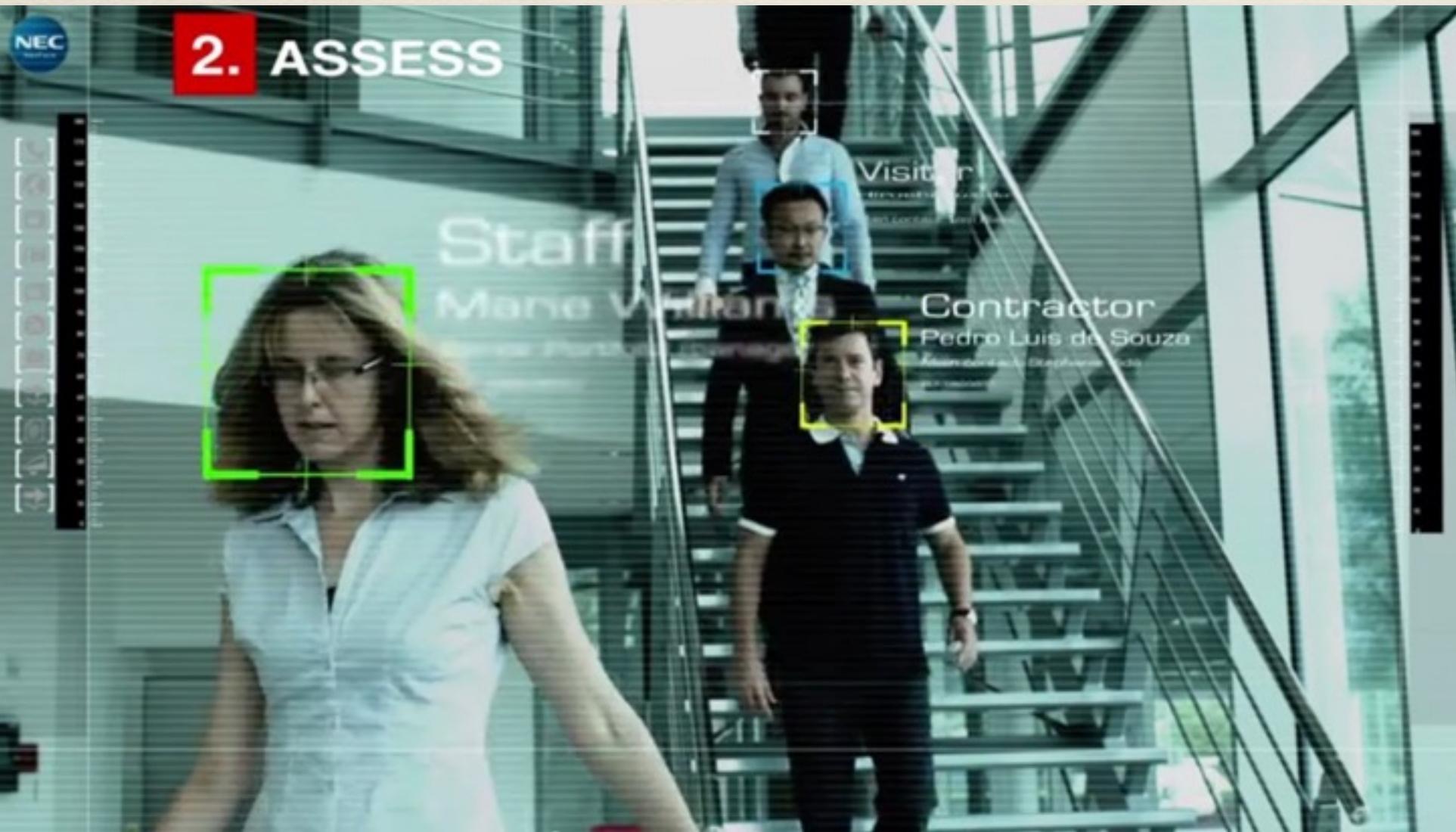


Cookie-ness Principles



Matter ←————→ Mind

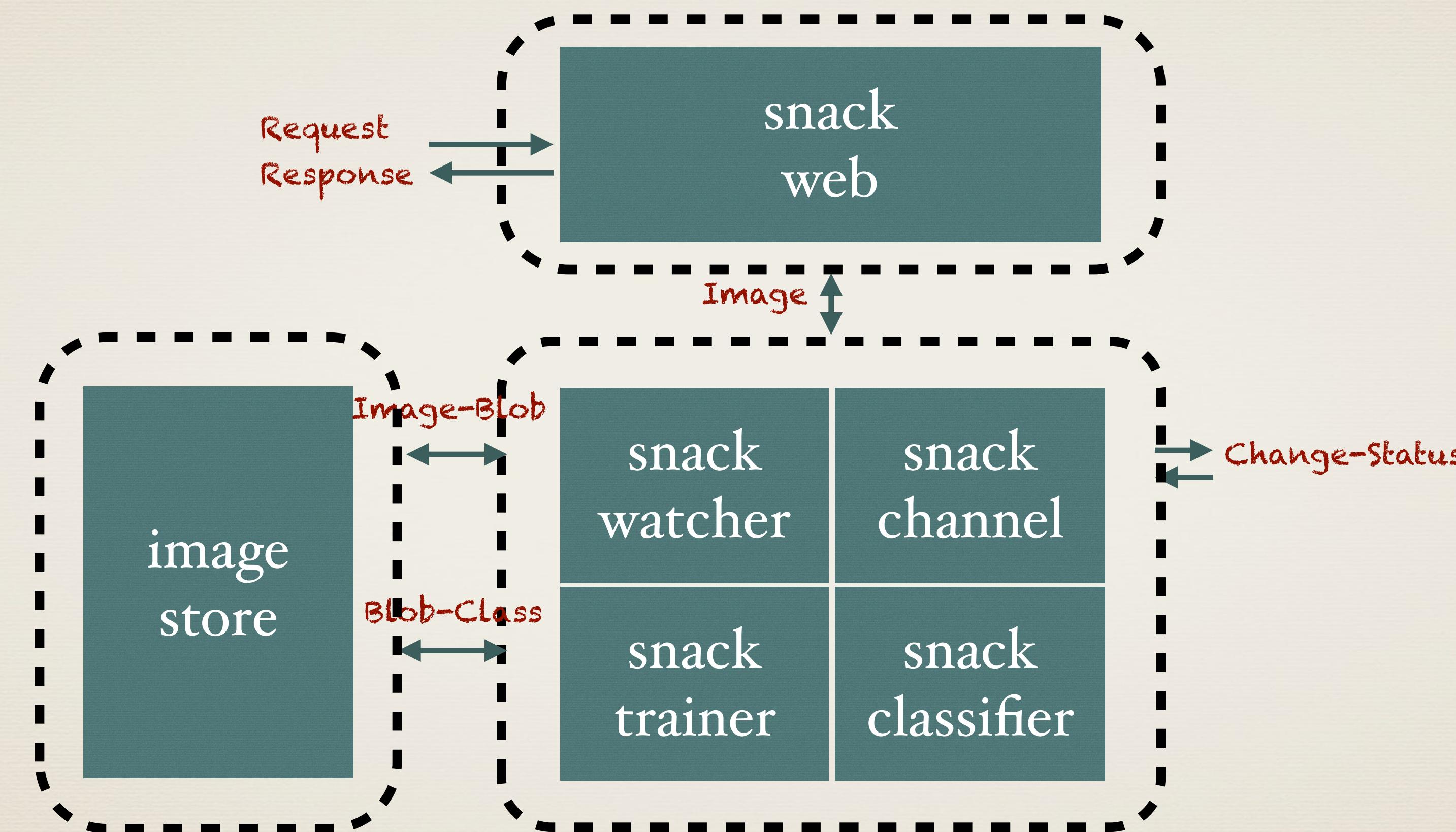
Face Watching



Pill Watching



Snack Watcher Monolith



Snack Watcher

192.168.13.17

Snack Watcher

Search

LINKS CALIBRATE SNAP TEACH

Image

Transforms & Blobs

Date

11 seconds ago

mask from bg cleanup mask apply mask extract blobs state changes classify blobs blob 01 blob 02 blob 03 blob 04 blob 05 blob 06 blob 07 blob 08 blob 09

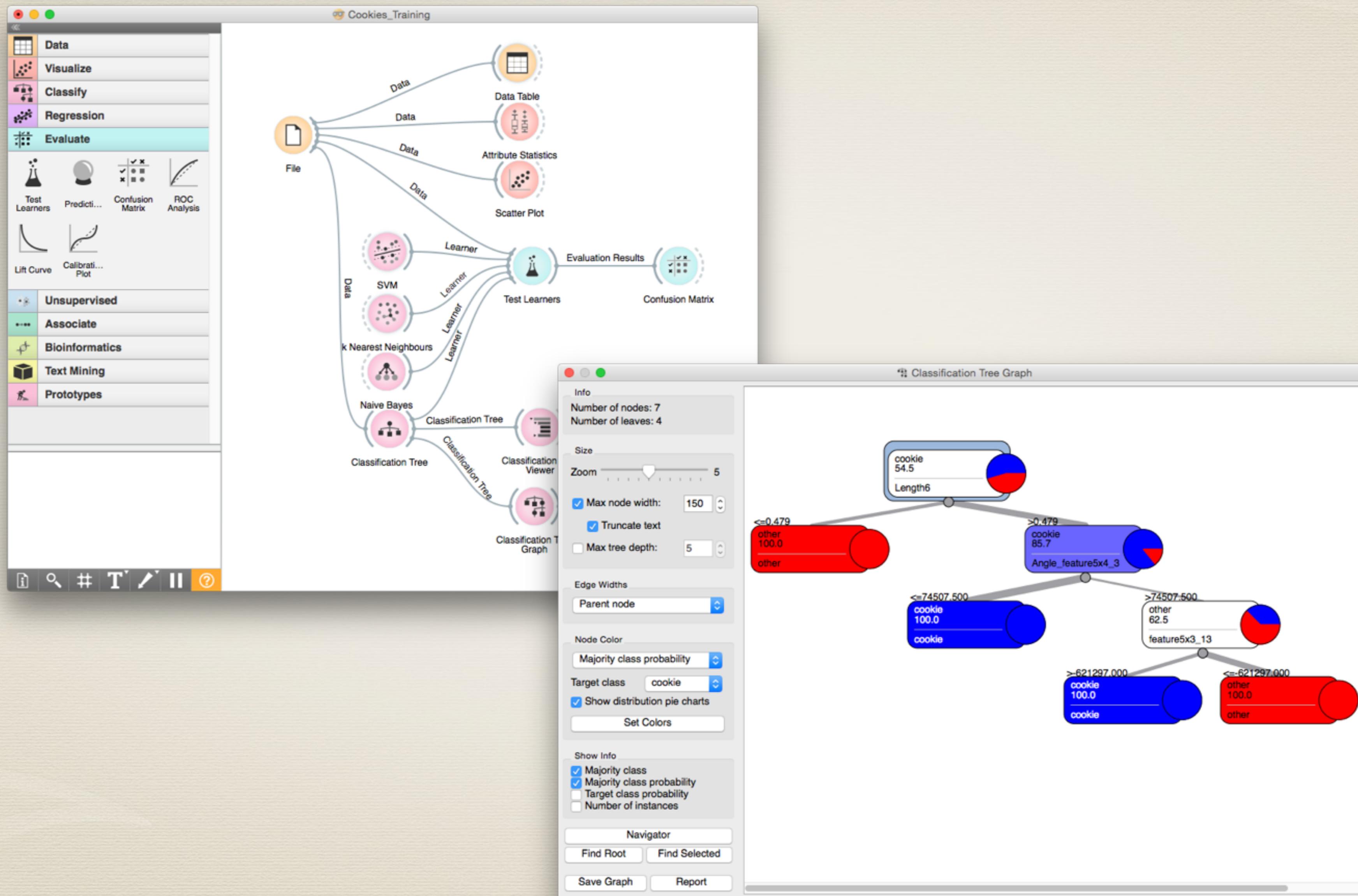
12 minutes ago

mask from bg cleanup mask apply mask extract blobs state changes classify blobs blob 01 blob 02 blob 03 blob 04 blob 05 blob 06 blob 07 blob 08 blob 09

27 minutes ago

mask from bg cleanup mask apply mask extract blobs state changes classify blobs blob 01 blob 02 blob 03 blob 04 blob 05 blob 06 blob 07 blob 08 blob 09

Snack Classifier



Snack Trainer

Snack Watcher

Search



LINKS CALIBRATE SNAP TEACH

HELP!

Help us teach Marvin! Sure, he's a robot. But he isn't always that smart...

So how can you help? Simple. In the drop-down lists below, just select the category that best describes the object next to it. With your help, Marvin can learn what snacks look like, and he'll give us more accurate snack reports in the future!

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angrybird ▾

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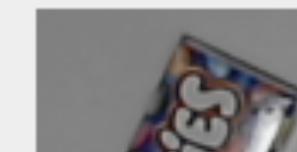
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Snack Channel

Slack

The Jonah Group

• Benny Cheung

CHANNELS (38)

chatops
chatops_dev

snack

tech-reading

DIRECT MESSAGES (76)

slackbot

#snack

16 Search

September 30th

Marvin Bot BOT 3:14 PM

NEW SNACKS DETECTED! (15 snacks left)

[http://snack.anaker.com:8888/static/images/snack-2015_09_30-15_10_50/blob_images/06-img-marked.png \(307KB\)](http://snack.anaker.com:8888/static/images/snack-2015_09_30-15_10_50/blob_images/06-img-marked.png)

October 2nd

Marvin Bot BOT 9:25 AM

WARNING: No snacks detected! Please restock. (0 snacks left)

Show message actions

Marvin Bot BOT 11:56 AM

+

From Monolith to Microservices

- * Build a decoupled monolith first
- * Iterate in finding the right boundaries
- * Transit to microservices if needed

So, here's the place
in the sky where we
store humanity's
largest numbers.

Sir, what's
in 3rd place?



HUMANITY'S LARGEST

Drops of water in

1ST 8 | 7 | 4 | 9 | 1 | 3

Grains of sand

2ND 7 | 9 | 4 | 9 | 3 | 6

Let me check... Here
it is: Articles that
say Microservices



HUMANITY'S LARGEST

Grains of Sand

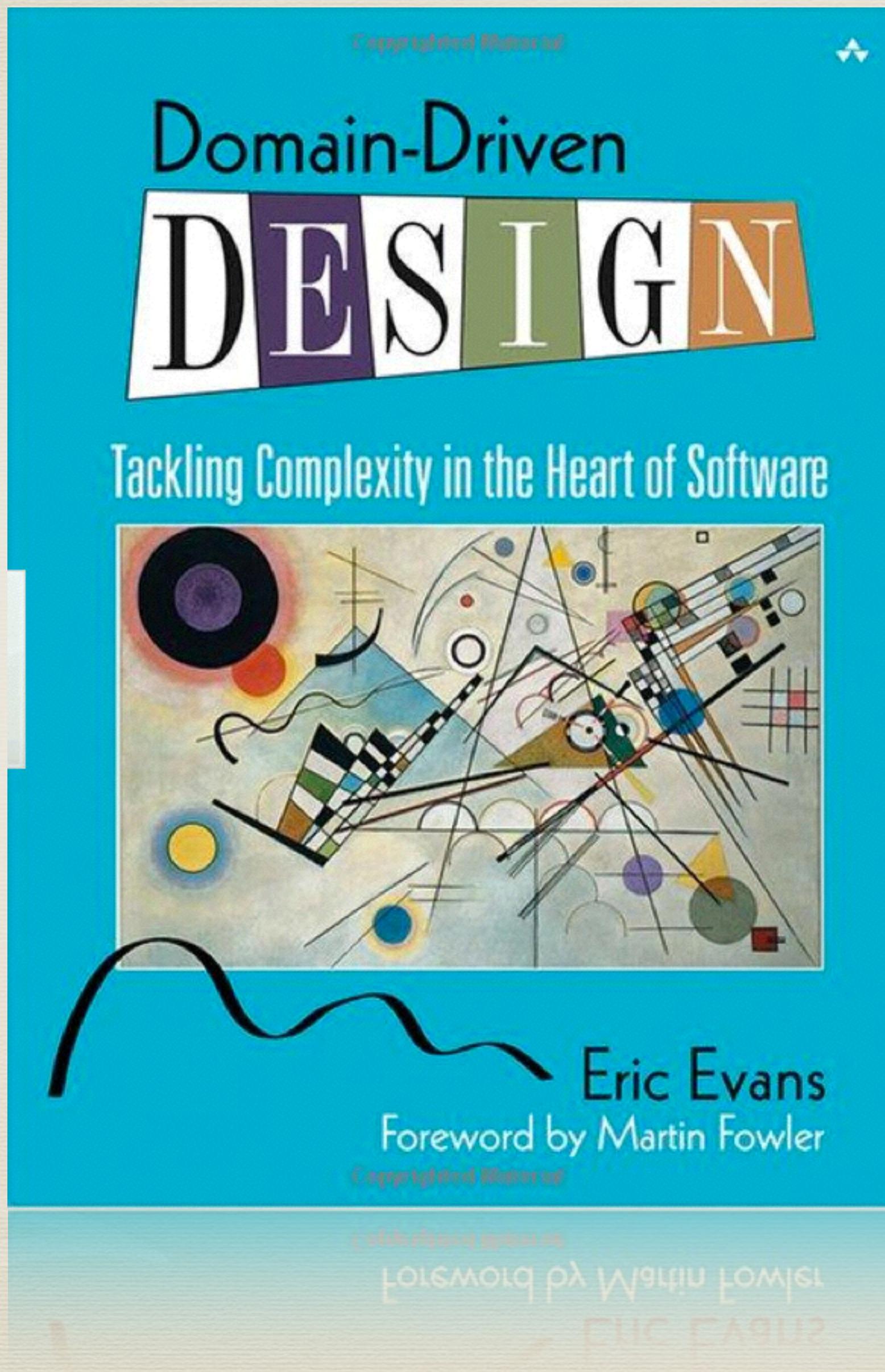
2ND 7 | 9 | 4 | 9 | 3 | 6

Articles that say

3RD 7 | 6 | 9 | 8 | 1 | 5

Daniel Stor {turnoff.us}

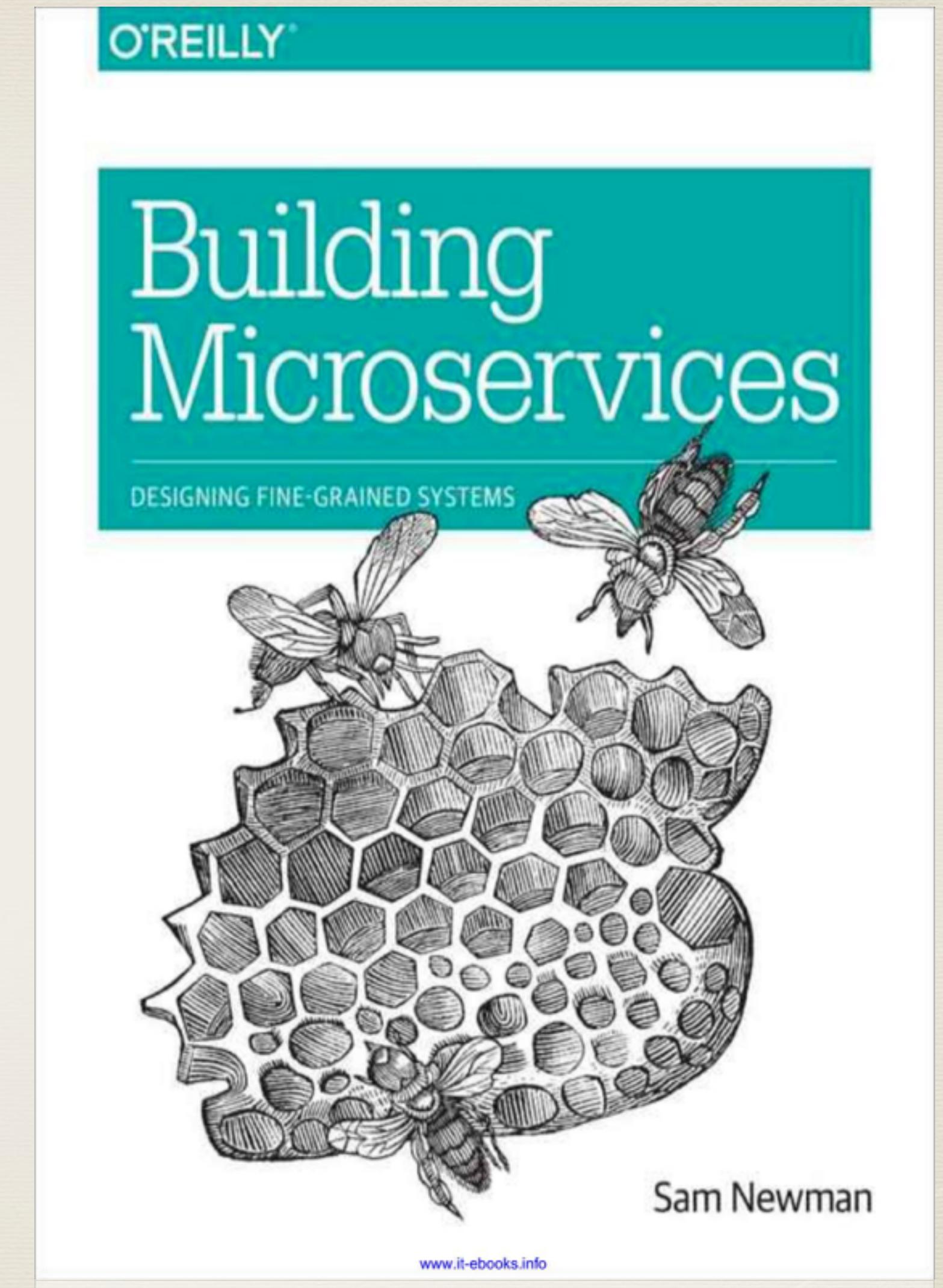
Picture Credit: Daniel Stor



Bounded Context

a specific responsibility
enforced by explicit
business boundaries

Small Autonomous
services that **work**
together, modelled
around a **business**
domain

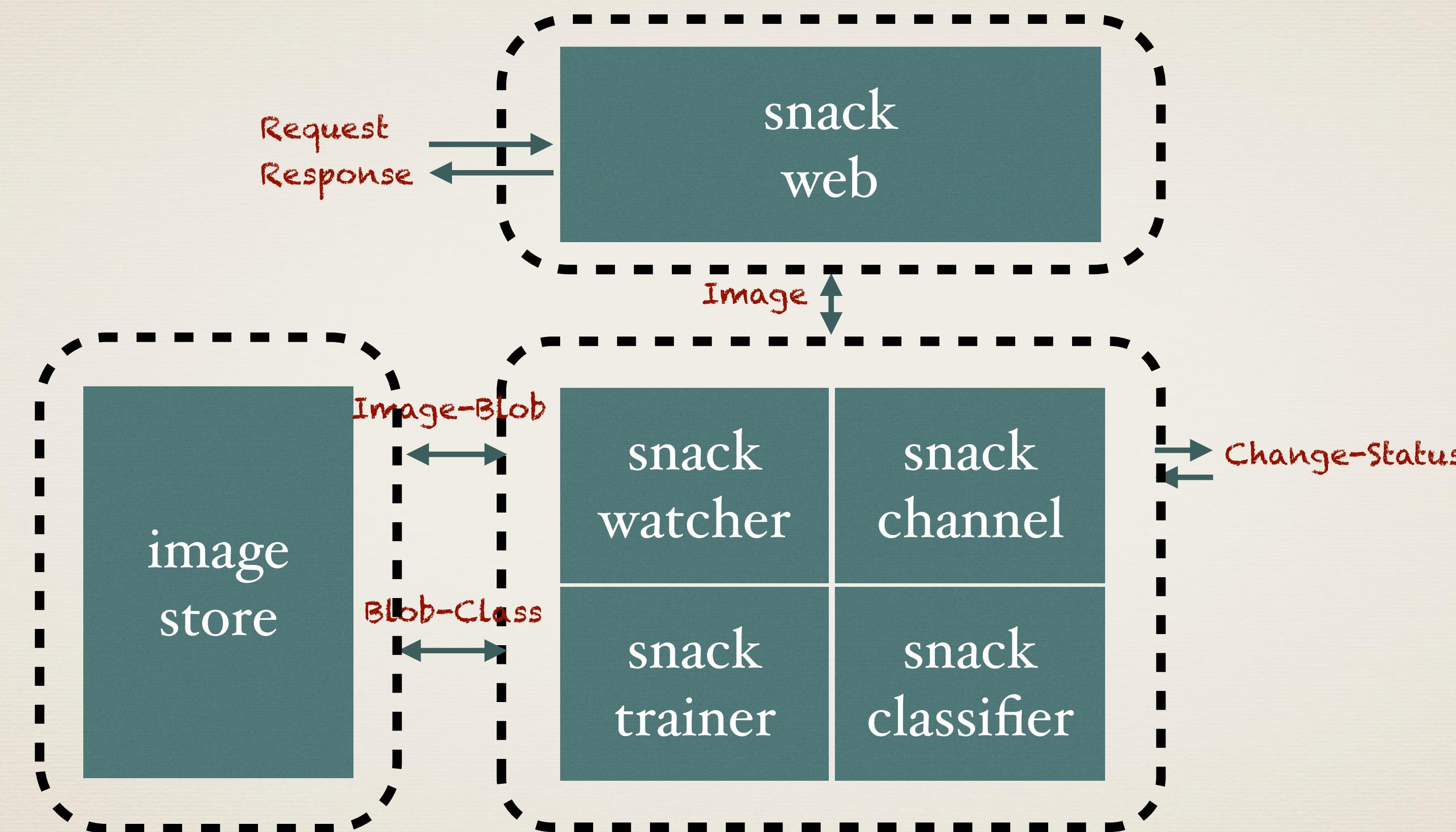


Microservices

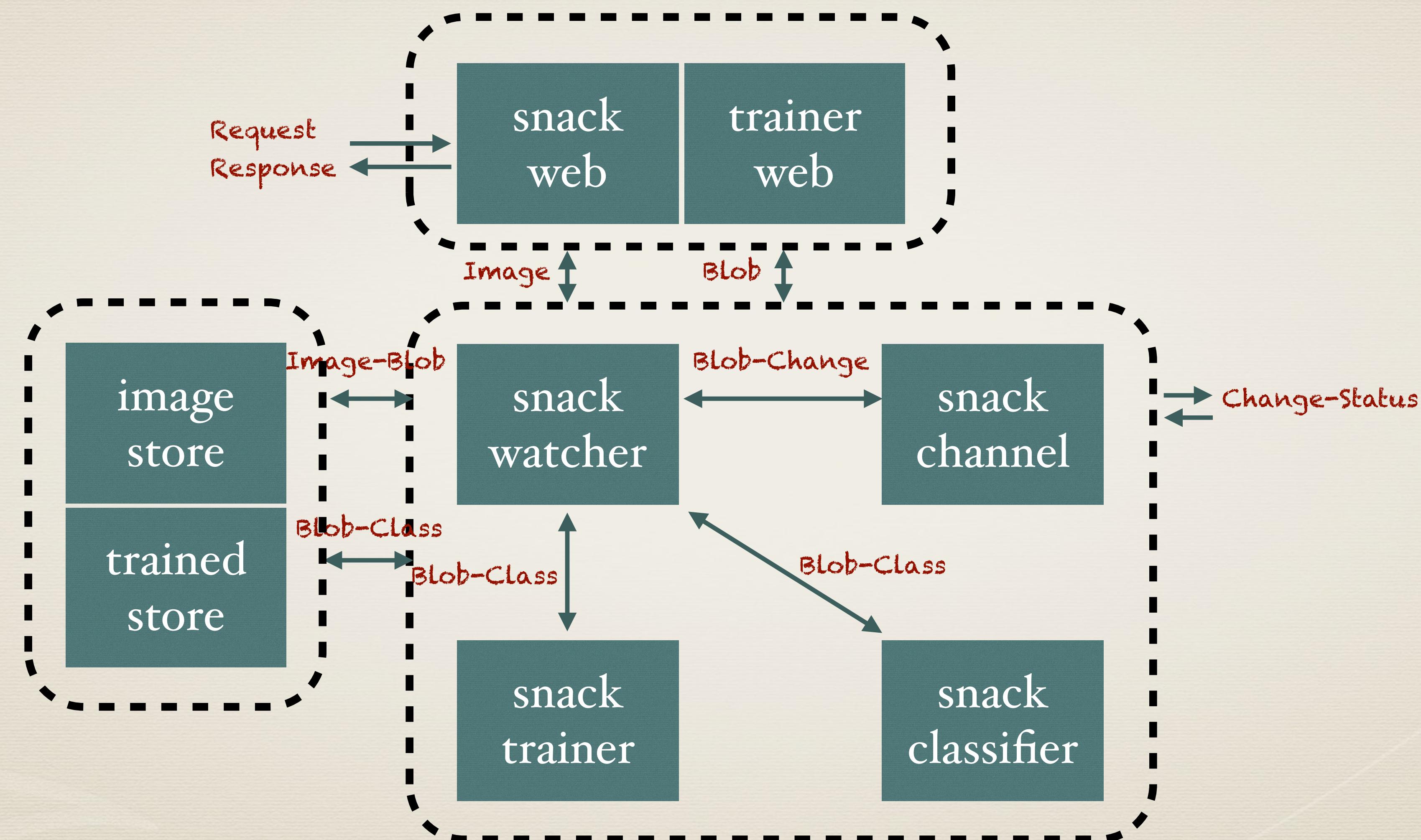
Design Principles

- * Business boundaries
- * Single responsibility principle
- * Encapsulation
- * Strong interfaces
- * Use ubiquitous language

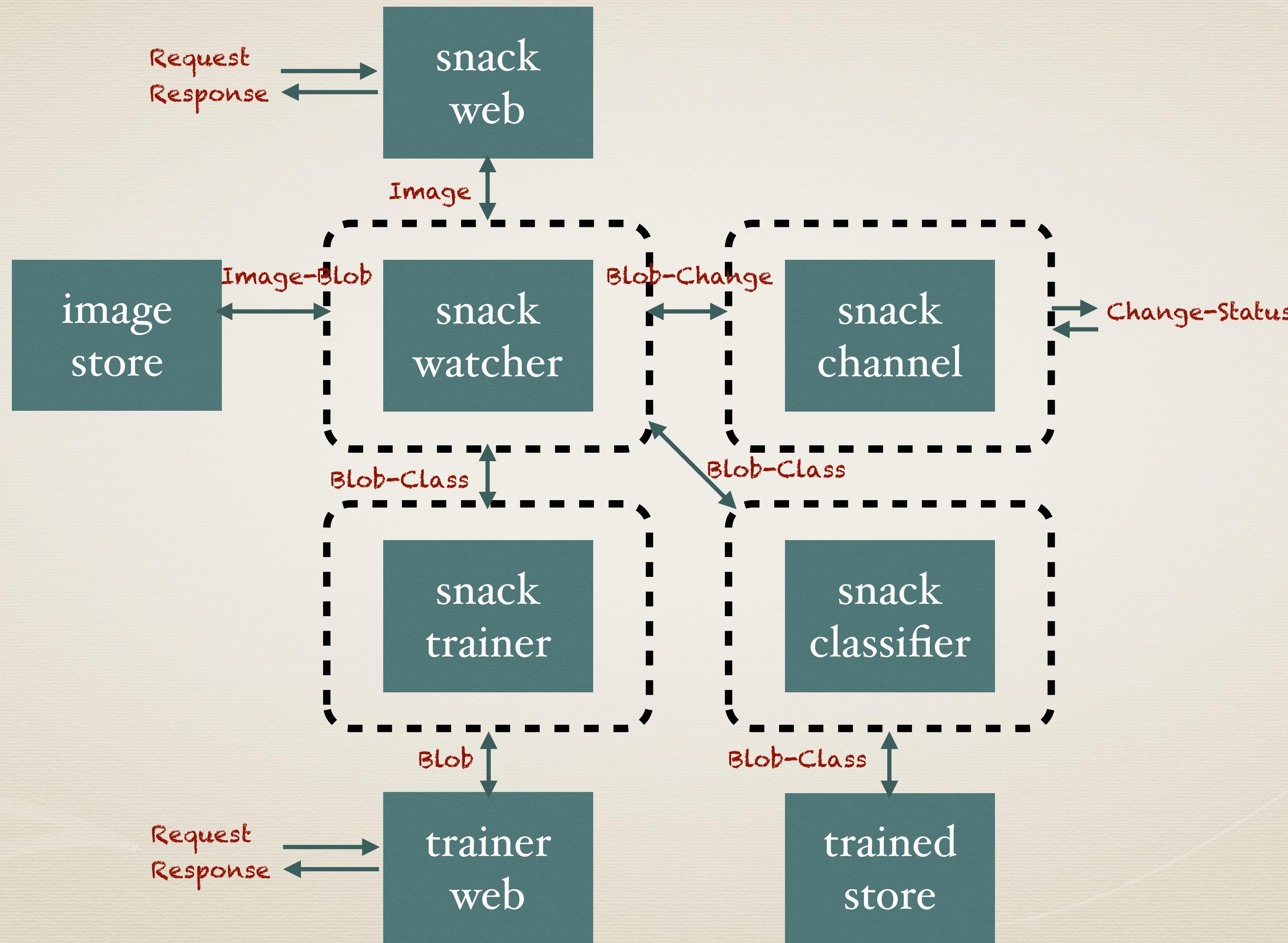
Snack Watcher Monolith



Snack Watcher Mono-Service



Snack Watcher Microservices



Mircroservices Friendship 101

2. I take picture, make and classify blobs

4. I shall reduce the export info to fit you

6. call me with 'snacks'



Snack
Watcher



Hubot

1. I know how to talk to slack channel

3. I want to show snack, snack counts

5. how can I call you ?

Mircroservices Dating 201

8. I use HTTP &
JSON data

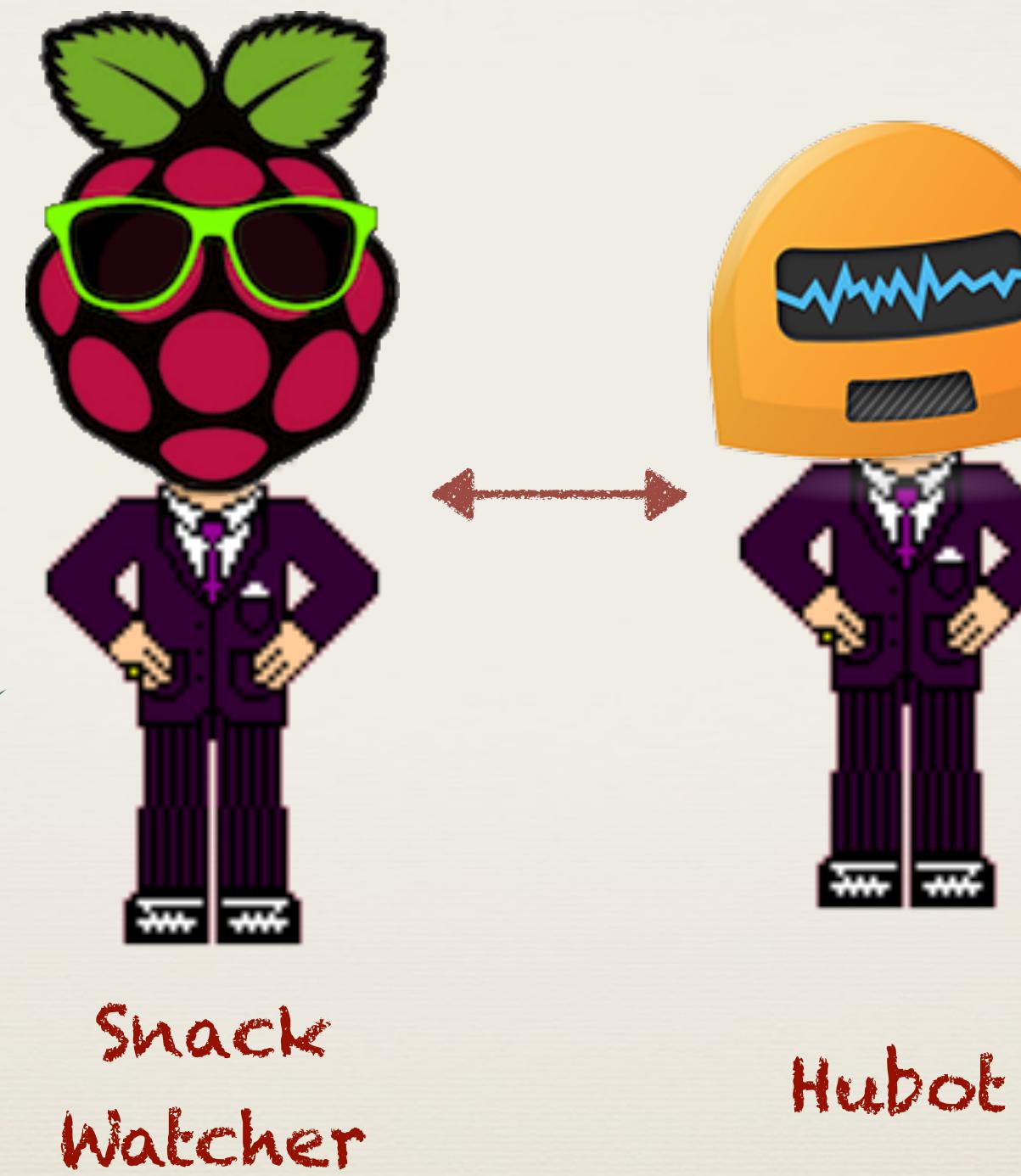
10. Call me at
[http://
snackwatcher/
snacks](http://snackwatcher/snacks)

12. That's a deal

7. Let's agree on
protocol & data
format

9. I like RESTful
API

11. I expect {
image: <curl>,
count: <total>}



Mircroservices Marriage 301

13. Hey, you want snack's changes info?

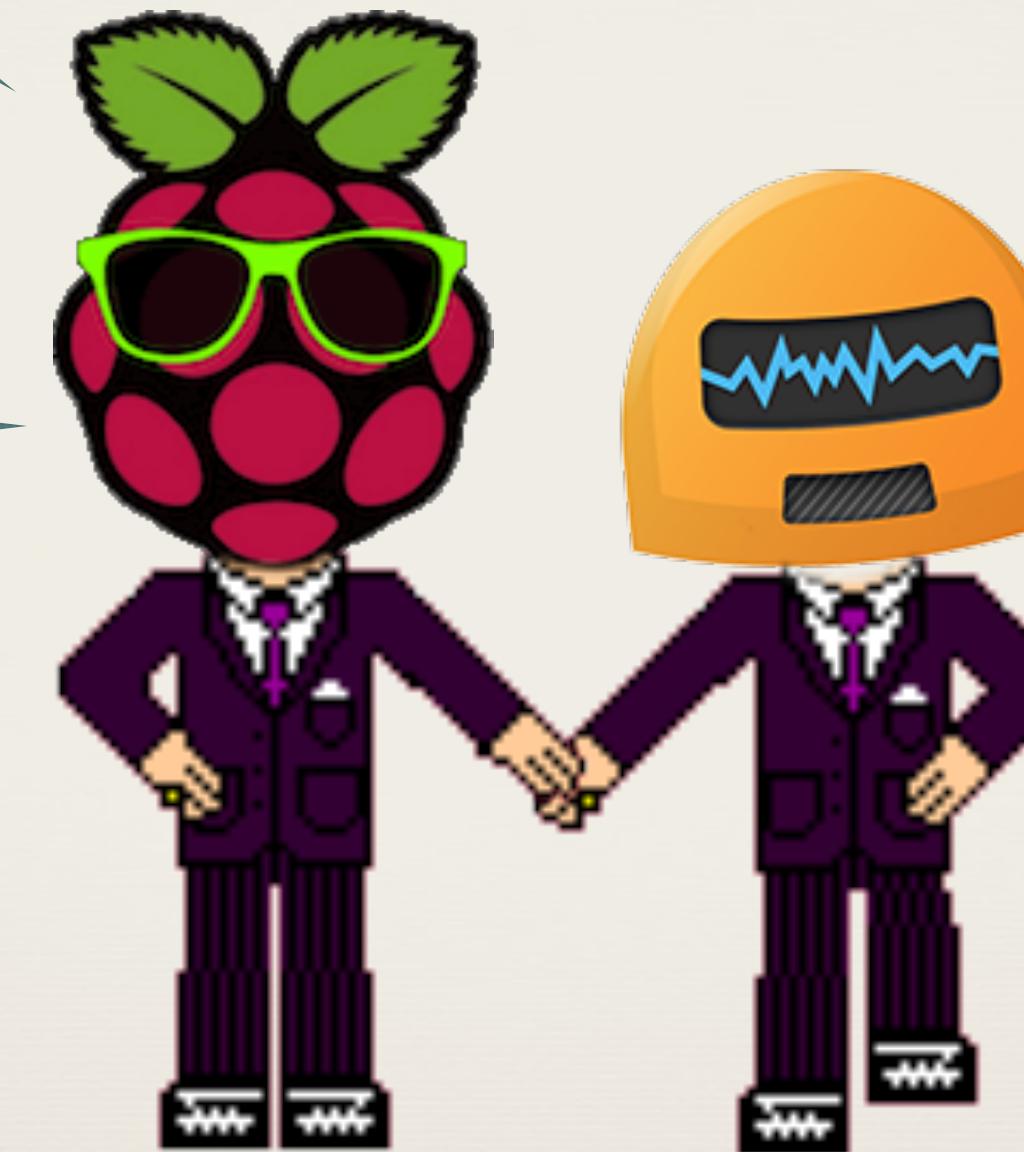
15. I can give you previous & current states

17. That's version 2 will come 2 days later

14. Oh yes, but I don't have states memory

16. Cool, I can tell state changes

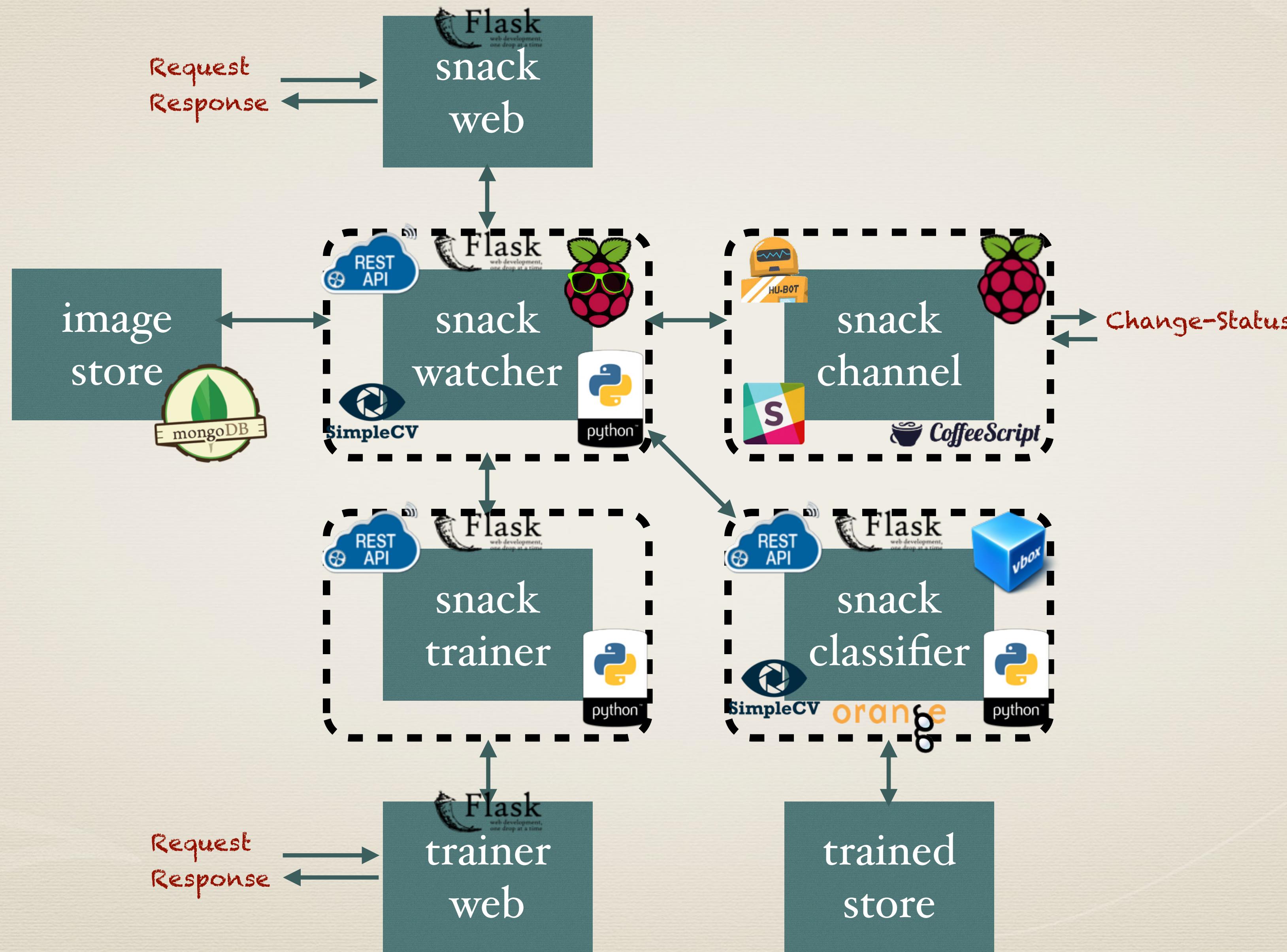
18. I shall switch over version 2!



Snack
Watcher

Hubot

Snack Watcher Technologies & Deployment





Summary

- * Watching snack is fun
- * Decomposing system into microservices
 - * do one business thing well
 - * clear boundaries
 - * protected by strong interfaces
 - * communicate with simple and consistent rules
- * Reusing snack watcher components

