

Everyday Data

NUS Faculty of Science Open House 2018

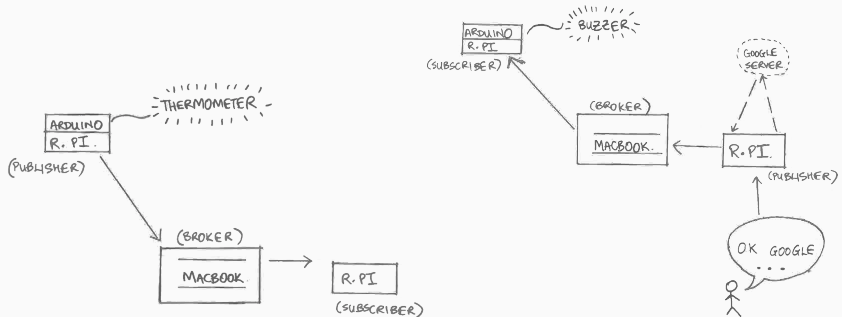
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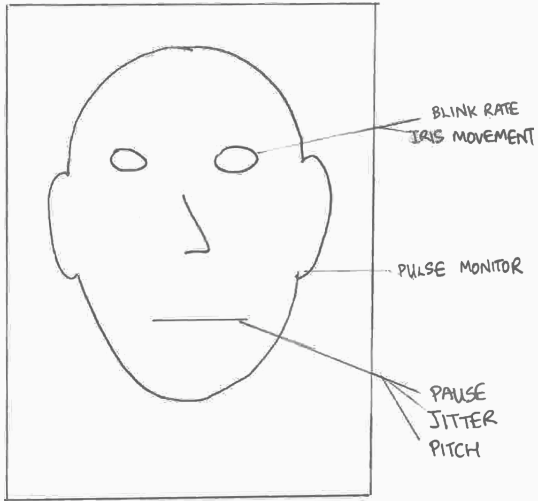
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Data, data everywhere – the agenda

- Smart temperature collection
- Communication between microcontrollers
- Natural language processing



Lie detection



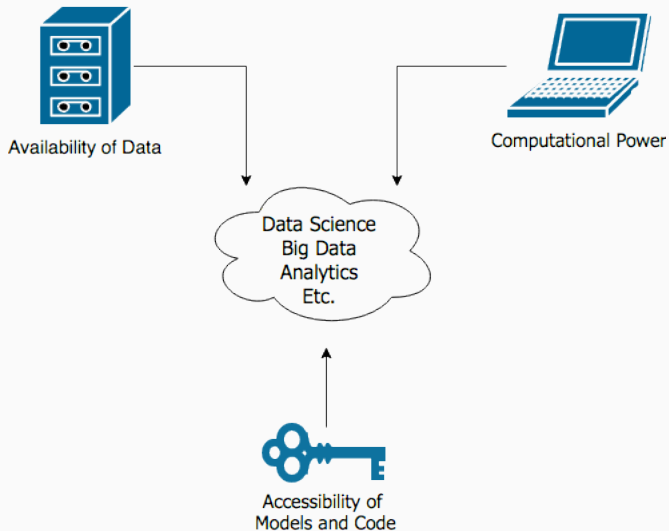
Data collection tools:

1. Webcam
2. Microphone
3. Heart-rate monitor connected to an Arduino
4. OpenCV for tracking:
 - 4.1 number of blinks
 - 4.2 eye movement
5. R packages for sound analysis:
 - 5.1 jitters
 - 5.2 pauses
 - 5.3 pitch

Data collection tools:

1. Machine learning models
2. Mixed models

The three that go together



Things to Google

- Arduino
- Raspberry Pi
- Internet of Things
- MQTT messaging
- OpenCV