

Rapid Prototyping with Machine Learning

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Case: Vivify



What:

Interactive Yoga Mat + App

Who:

Victory Hammel (IDP 2015,
IDEO Chicago)

How:

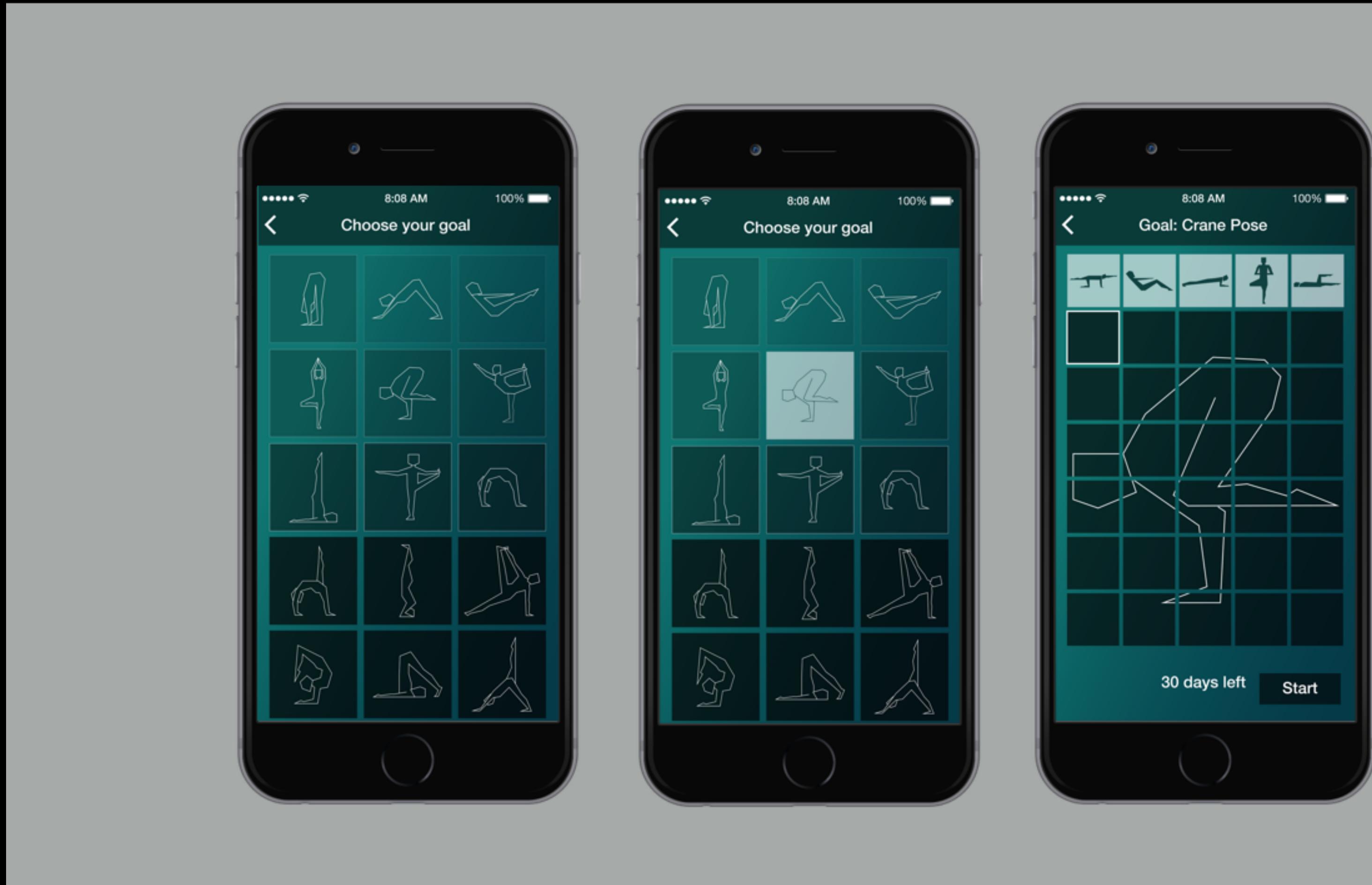
The mat knows what exercises people do, and gives them instant feedback

Tech:

Arduino, Pressure Sensors,
Smartphone App

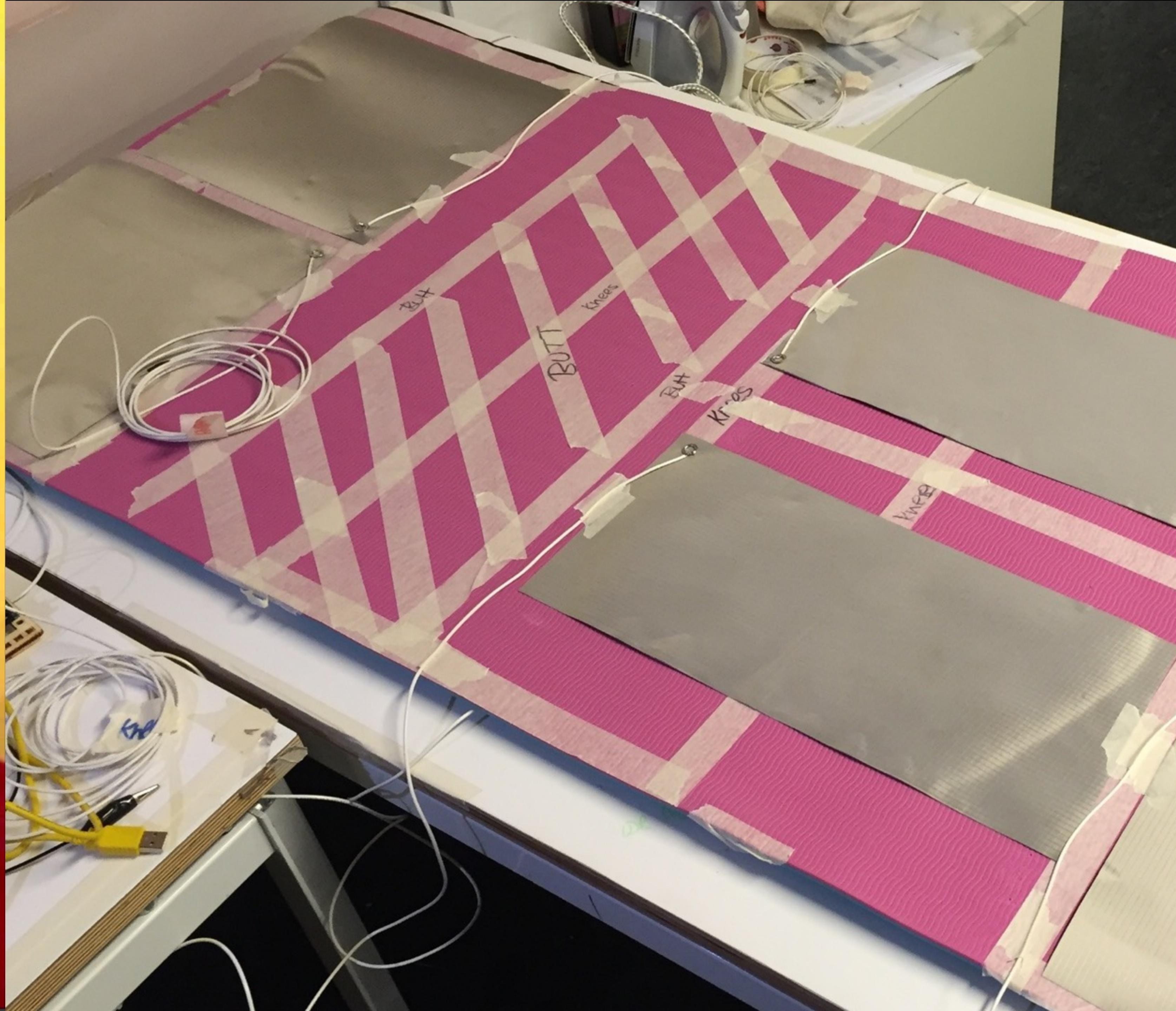
Project length:

8 weeks









Input -> Decision algorithm -> Output

Pressure sensors -> if statements -> Playback movie





lack of body
markness &
understanding

Variety

Ordering of
things forced to
do the exercises

Formatting
the flow of
exercises

To enter the
next level
The next level
It's the same
with games etc

The idea is to
be able to do
something you
can't do at the
moment

you're running
the next level
- It's the same
with games etc

Decision
and level

is of resistance to
handle the body healthy
in reality

at risk of risks
spies but can get
help

USER JOURNEY

No
enjoying
the
exercises

No
Motivation

No
feeling
as the
exercises

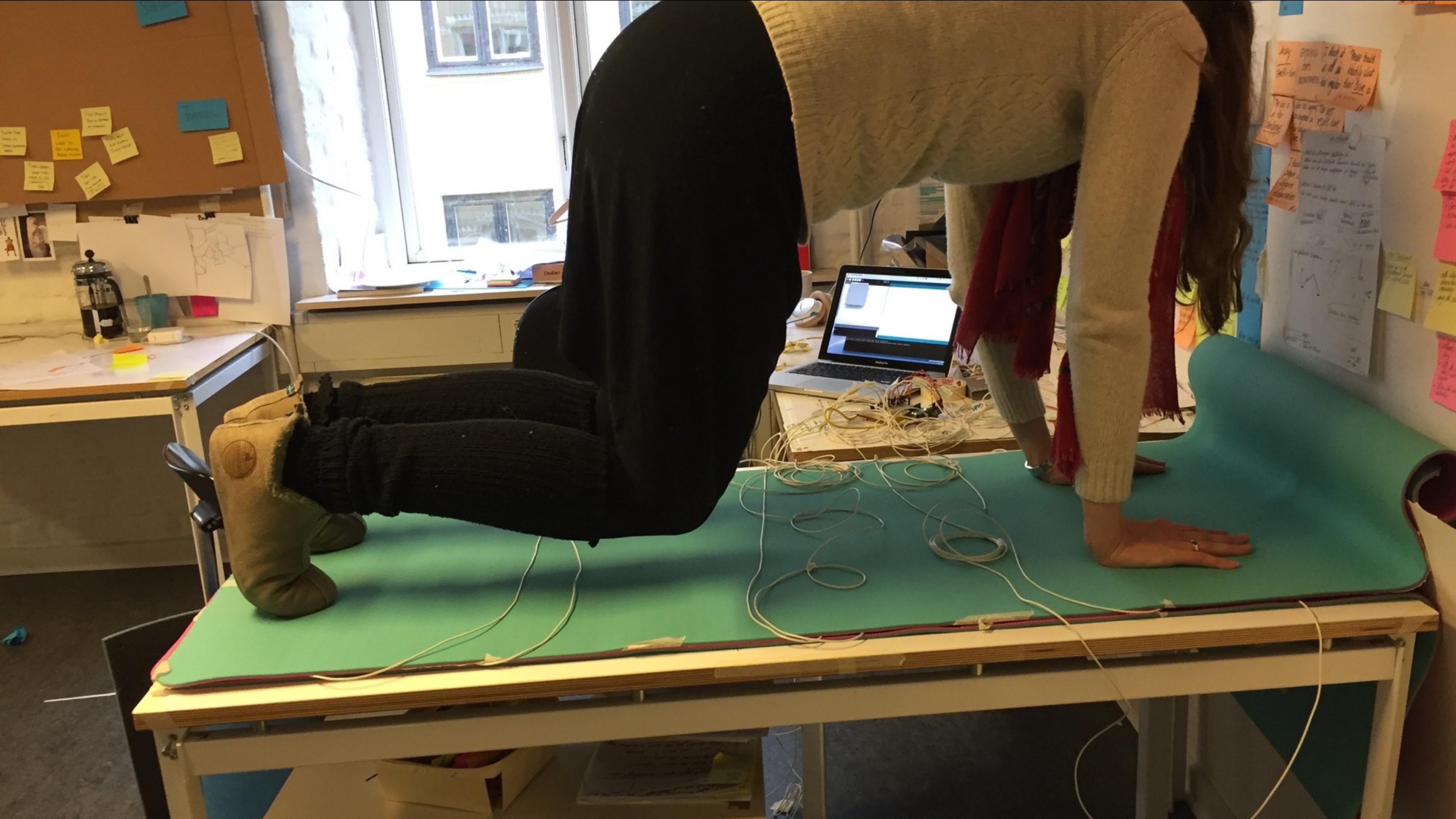
No
flow

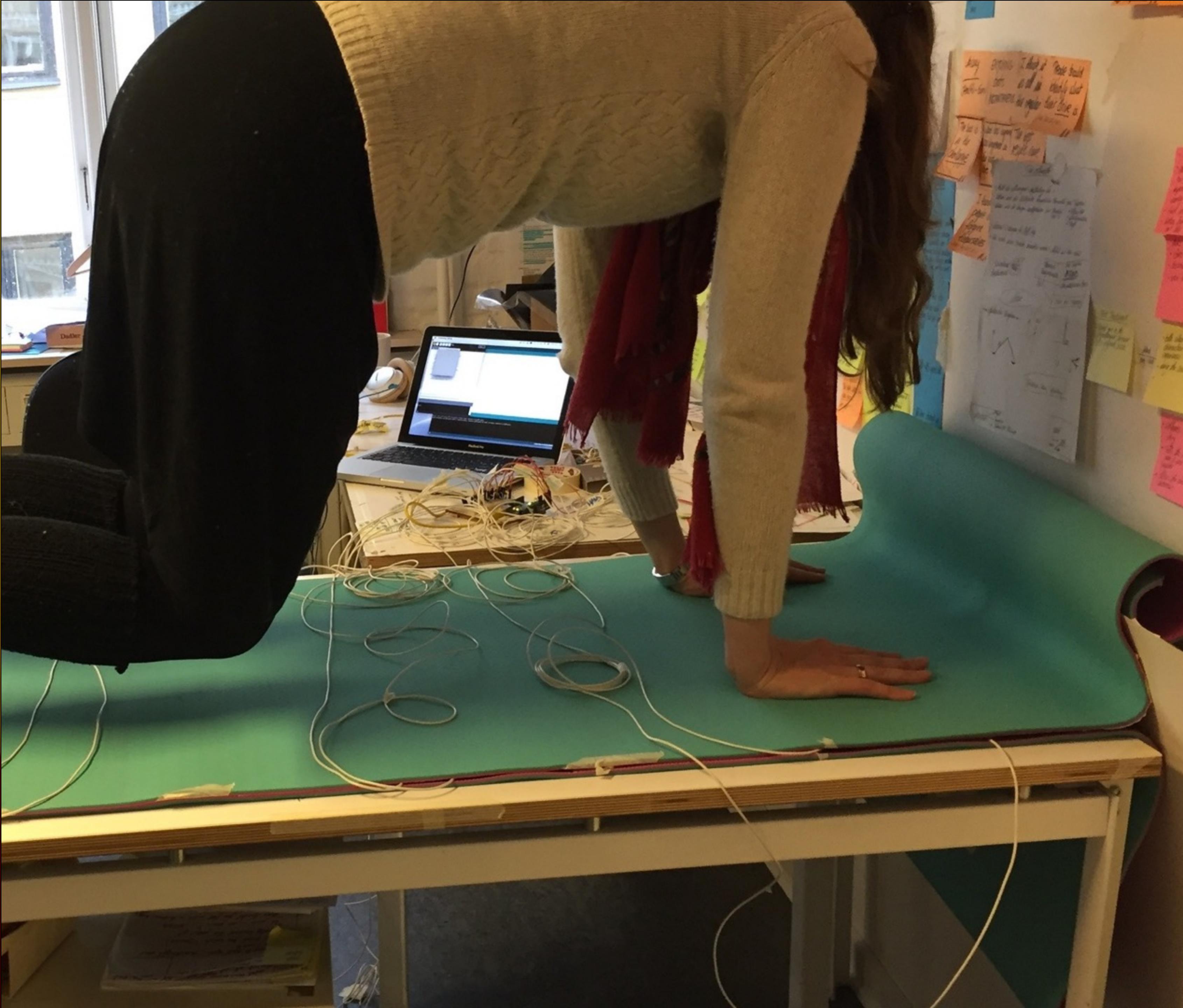
20-45 years old

changes do the
body
• feel the state about
your body is not
good
• better for body
activities

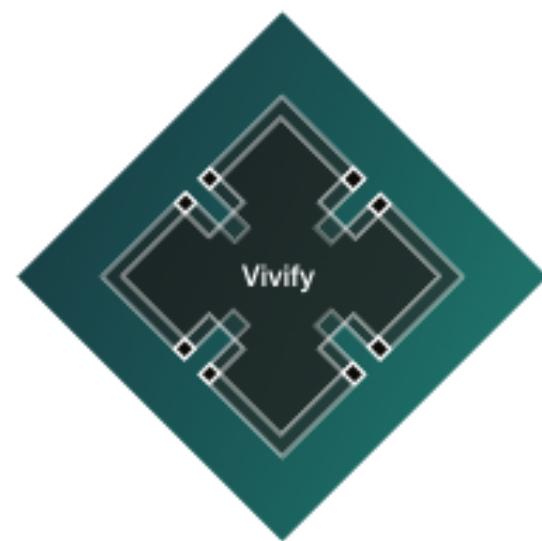
using the real world and the
real world with the product
for feel free

20-45 years old





Exercise: Try to redo part of Vivify in one hour



Use ConvnetOSC(mac) + Wekinator to
distinguish between 3 different yoga poses



Input -> Decision algorithm -> Output

~~Pressure sensors~~ -> ~~if statements~~ -> Playback movie

Webcam input -> ML algorithm -> (Playback movie)

1 hour Rapid ML Prototyping

Redo Vivify in 1 hour

Link: victoria-hammel.com/vivify

What: An interactive yoga mat
that knows what yoga positions are being made on it

Inputs: ~~Pressure sensors~~ webcam + ConvnetOSC

Decision logic: ~~If else statements in code~~ machine learning classification

Outputs

Up to you! Show an image or a gif, playback a movie, ~~play a game?~~

Groups

Work in groups of two or three. Distribute the Macs.

https://twitter.com/floatono_k/status/955903433885798400