

Rapid Prototyping with Machine Learning

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Case: Vivify



What:

Interactive Yoga Mat + App

Who:

Victory Hammel (IDP 2015,
IDEO Chicago)

How:

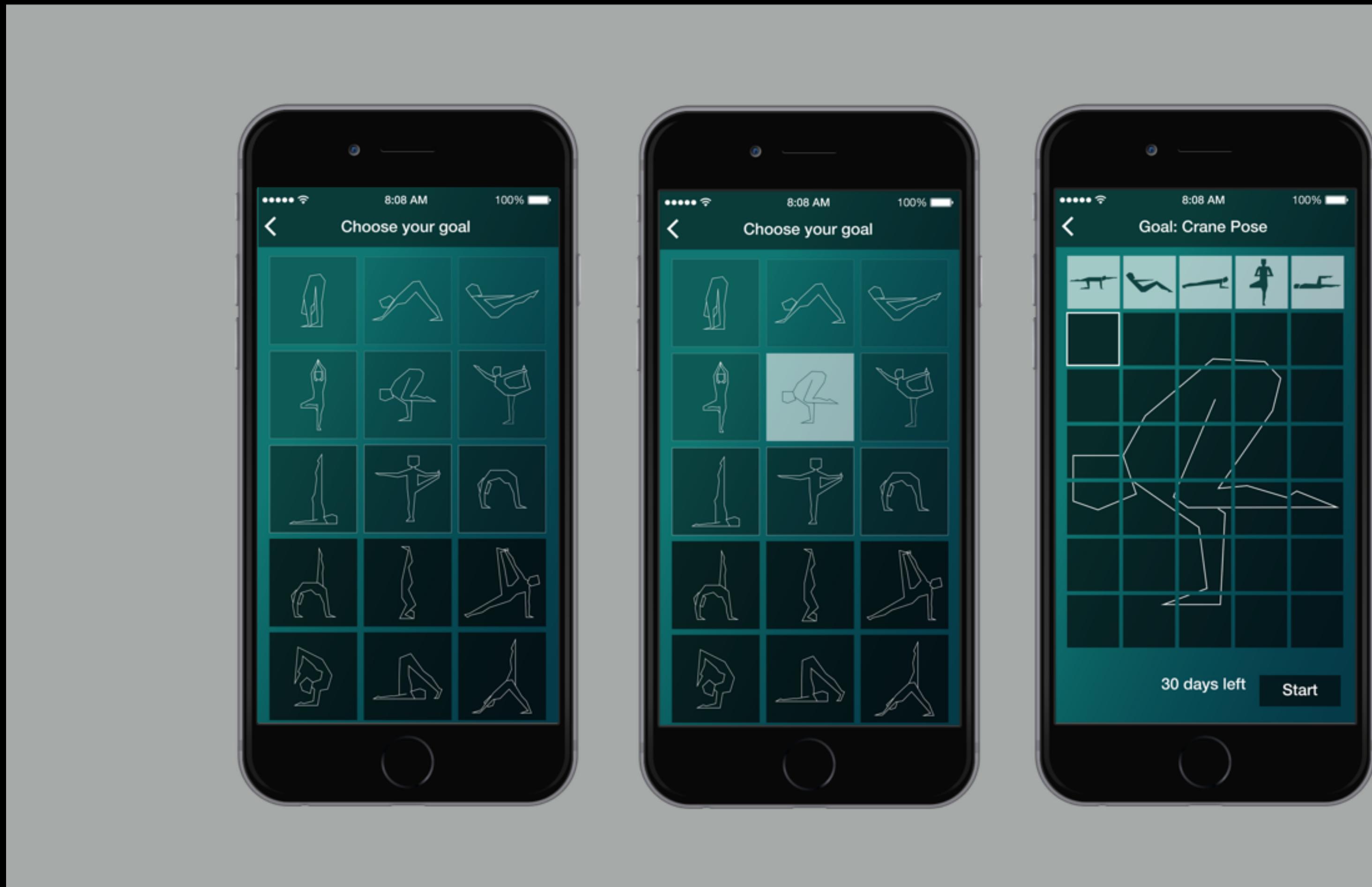
The mat knows what exercises people do, and gives them instant feedback

Tech:

Arduino, Pressure Sensors,
Smartphone App

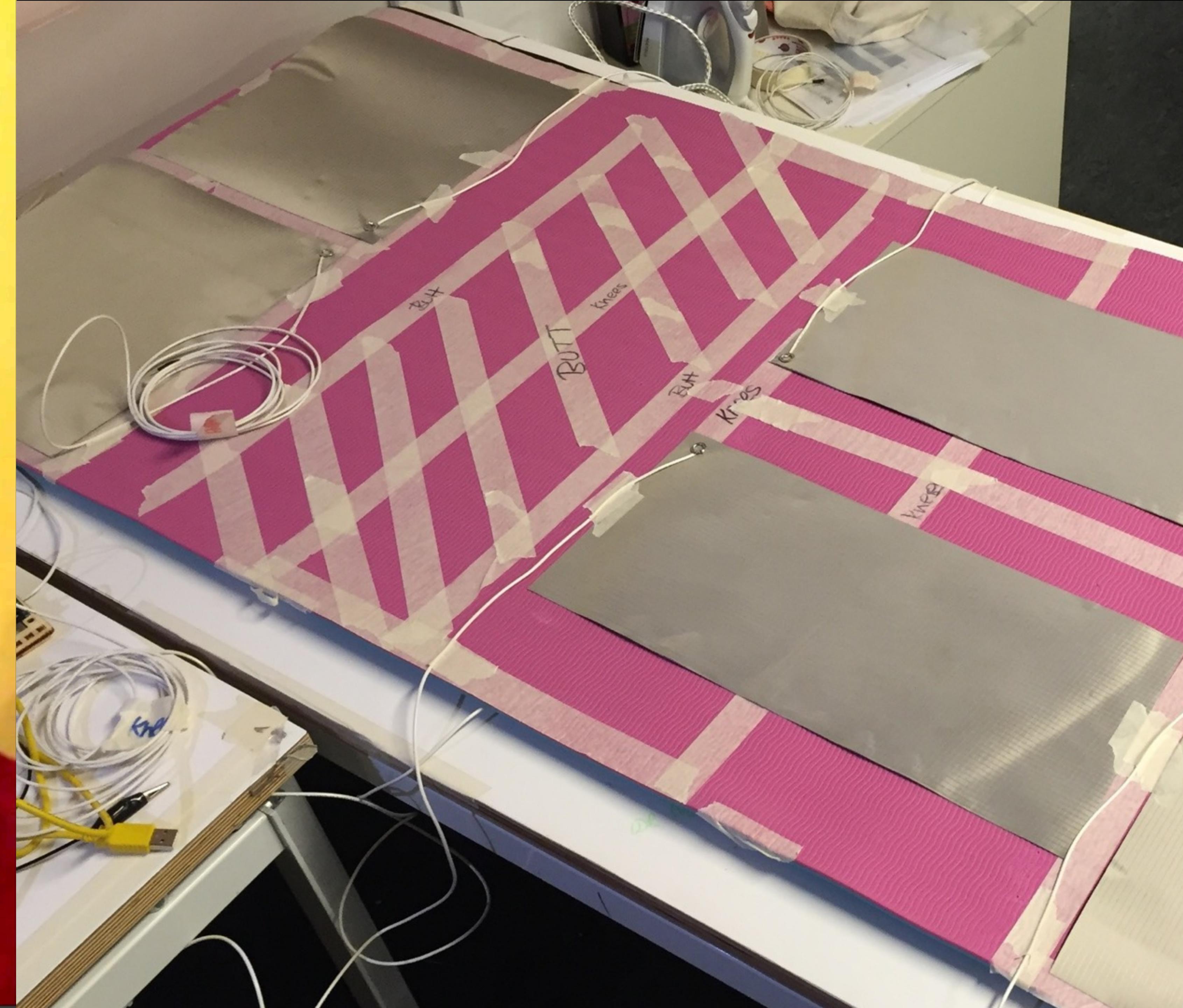
Project length:

8 weeks







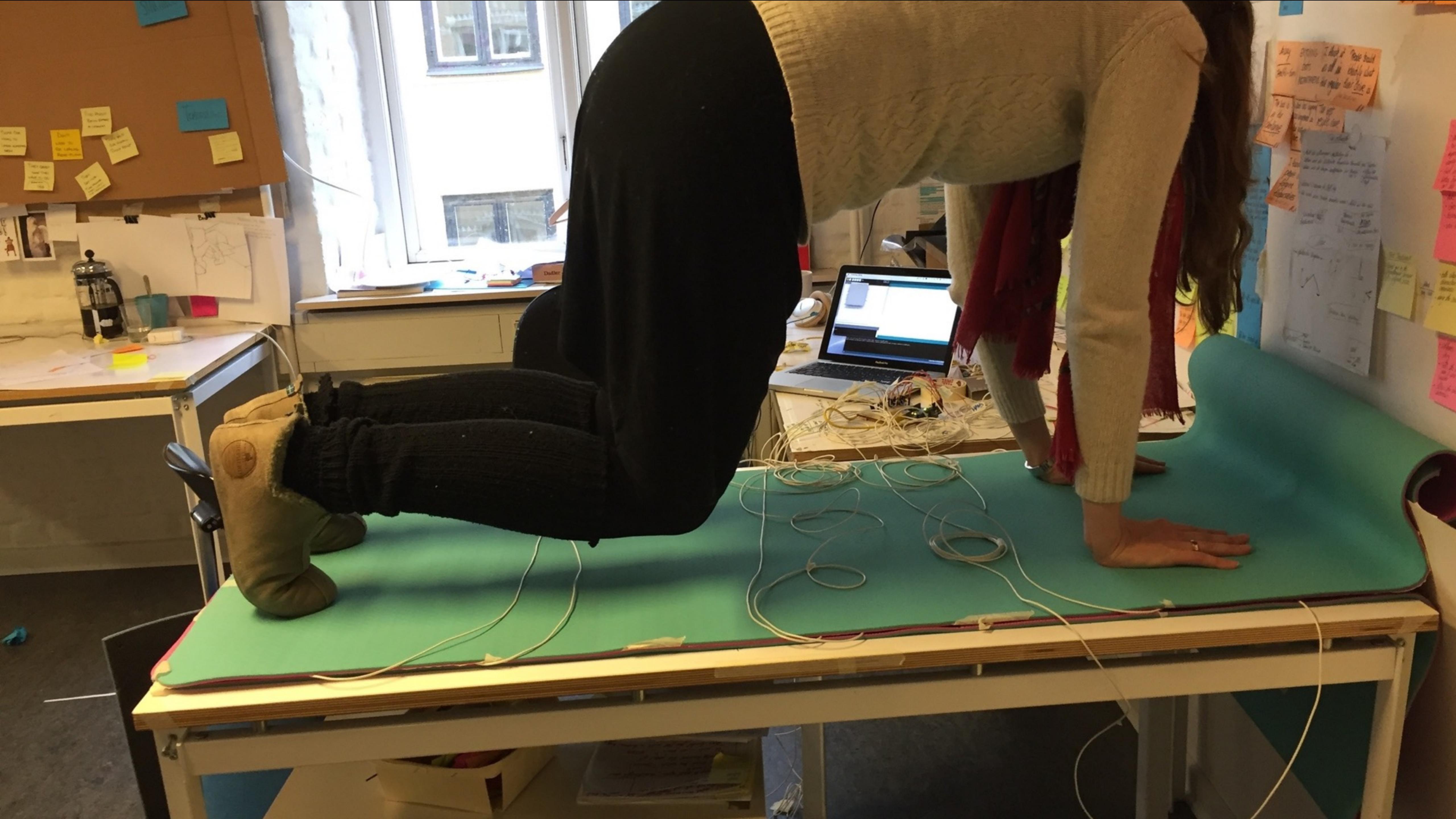


Input -> Decision algorithm -> Output

Pressure sensors -> if statements -> Playback movie





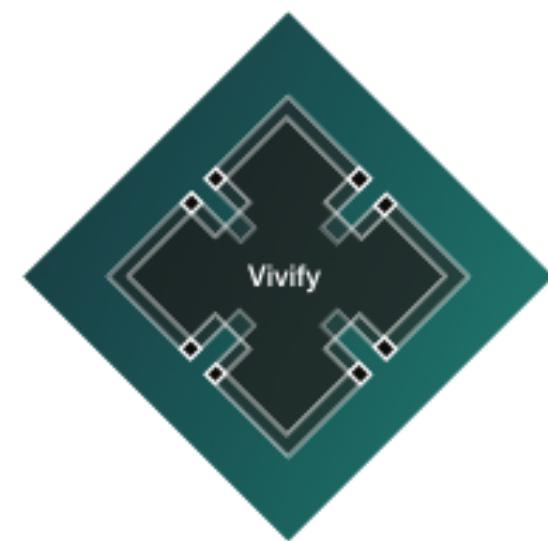


Any strings I have & some board
will be the best & ready for
something to make for the 5

Will be great
for the 5



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