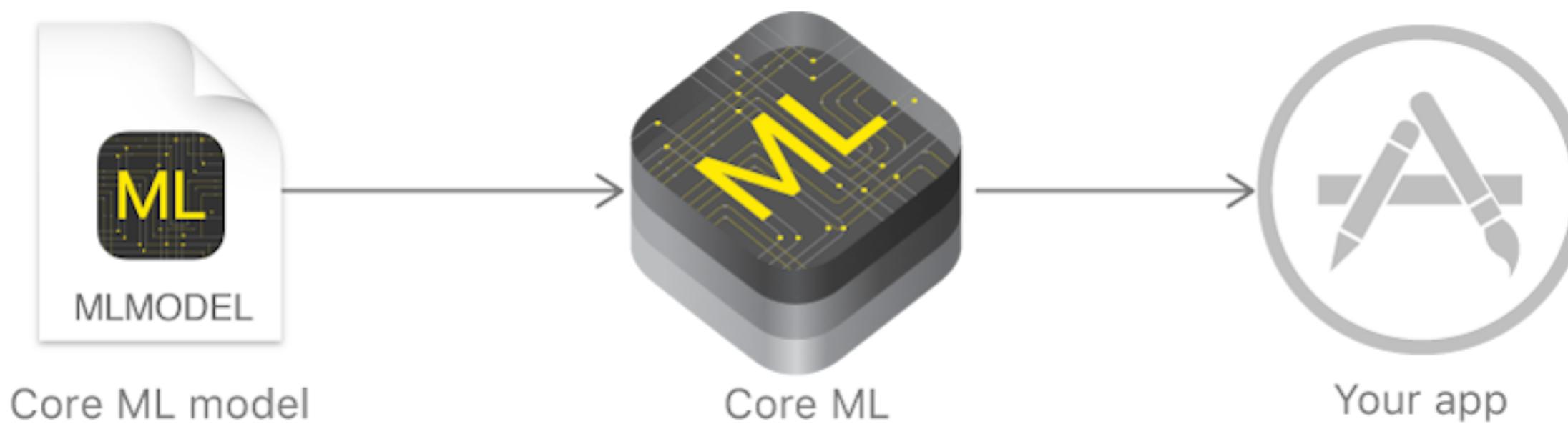


# MLModels in practice

## from training to using



Gintaras Jakimavičius

Talking about...

Swagmeter

MLModels and others

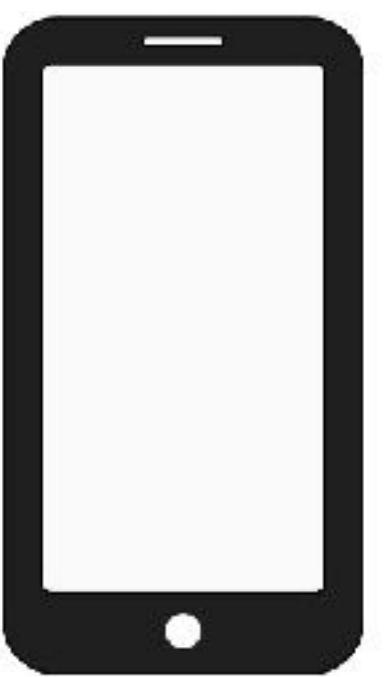
Resources

Final thoughts

# Swagmeter story

*Swag*  
METER

# Simplest idea possible →



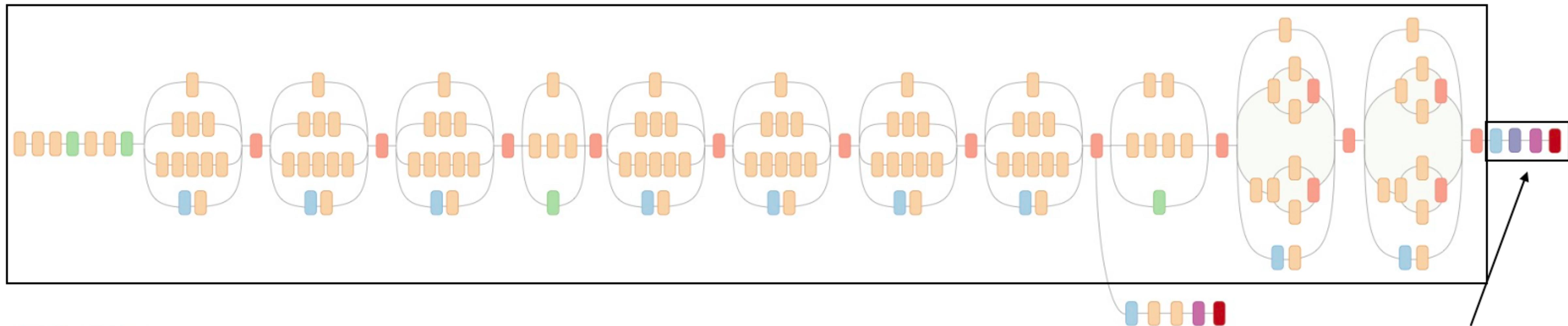
Decide between hipster and squatting slave



Learn about  
TensorFlow

# Actual model training

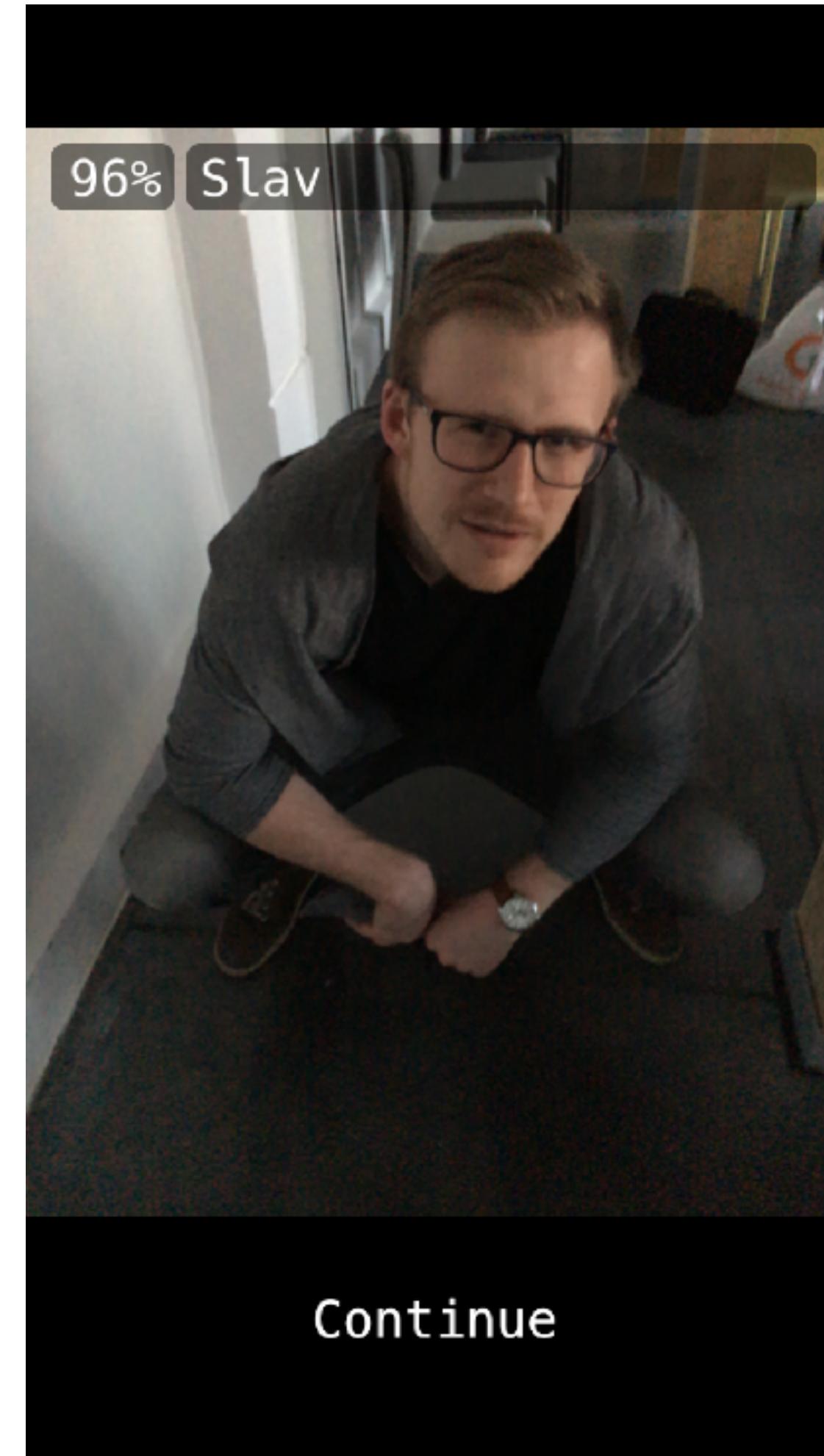
## Inception v3



- Orange square: Convolution
- Blue square: AvgPool
- Green square: MaxPool
- Red square: Concat
- Purple square: Dropout
- Pink square: Fully connected
- Dark red square: Softmax

Final part:  
8x8x2048 -> 1001

# Initial success



# Data

Tinder-sort



GANGSTER



BANKER



STONER

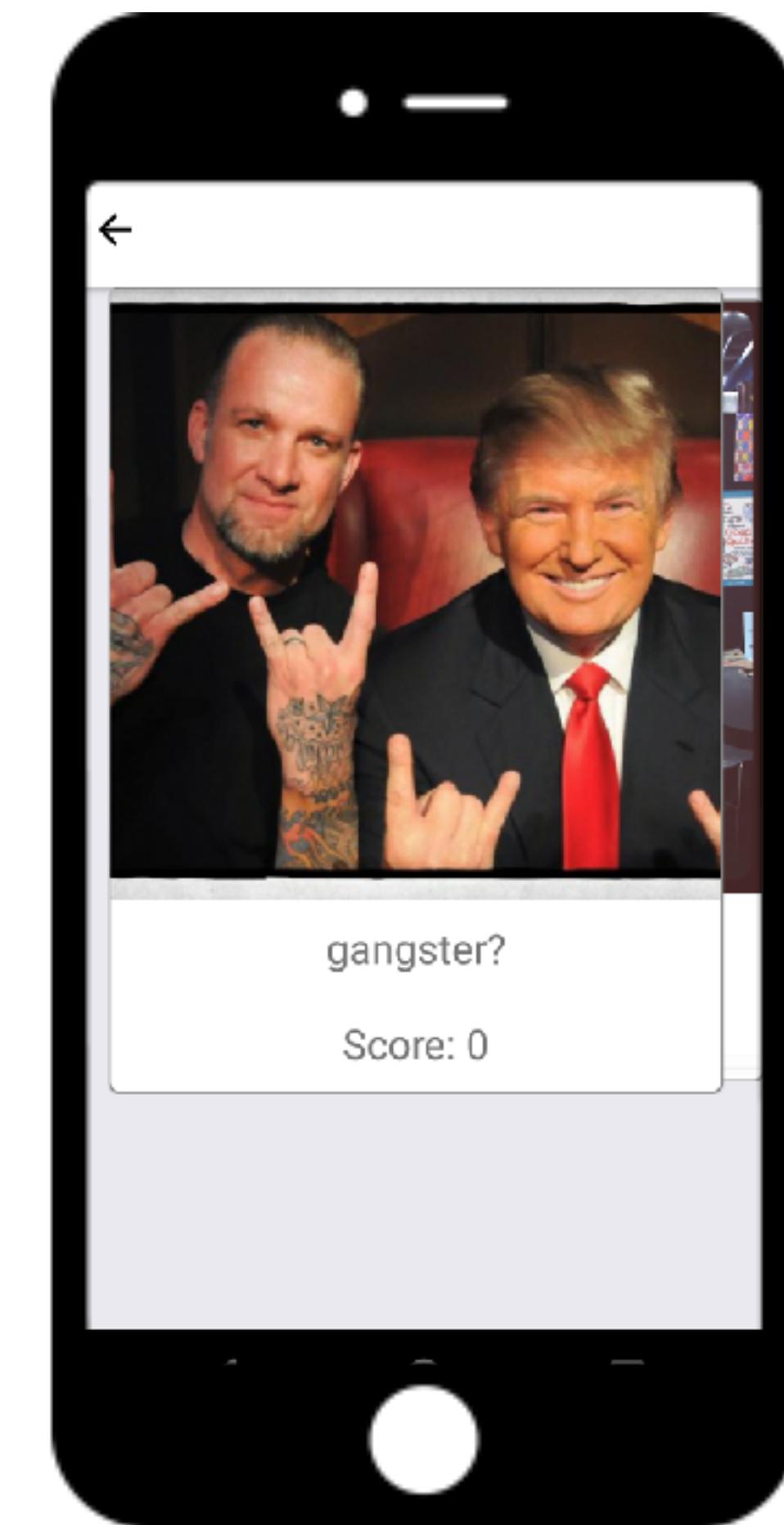


SQUATTING SLAV



HIPSTER

500 images per category



REACT NATIVE + NODE.JS

2 SORTS PER SECOND

# Fails



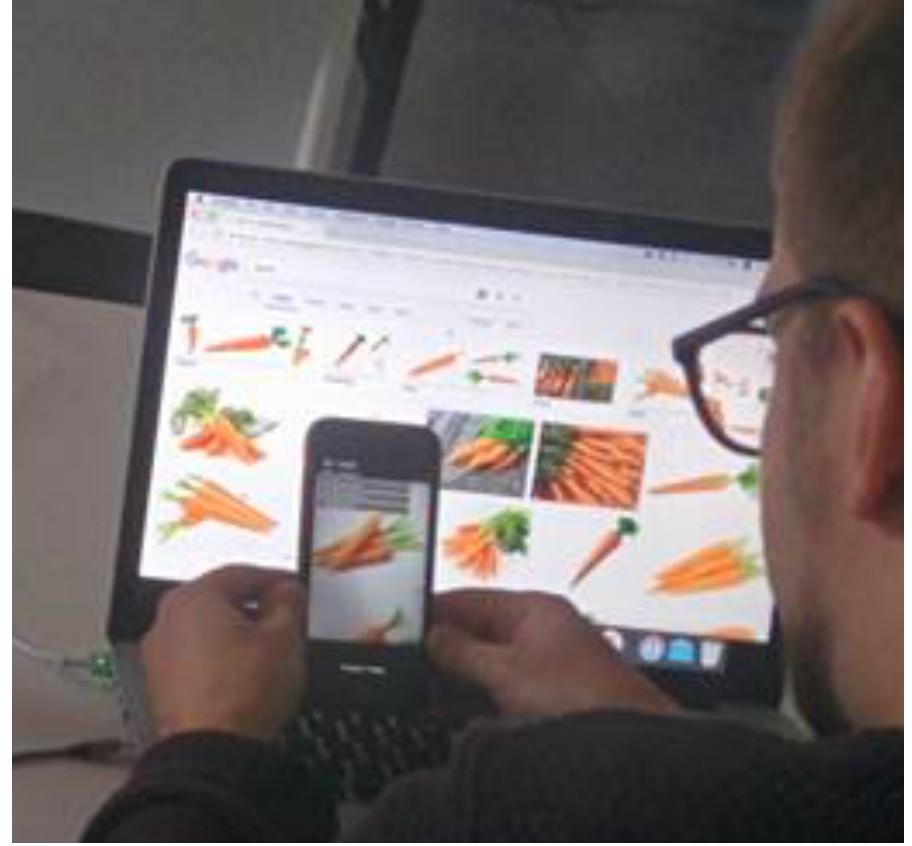
Celebrity



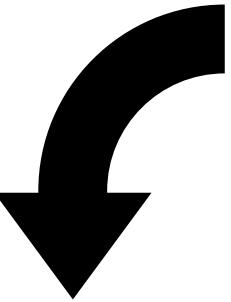
Black colors  
classified as gangster



Duckface

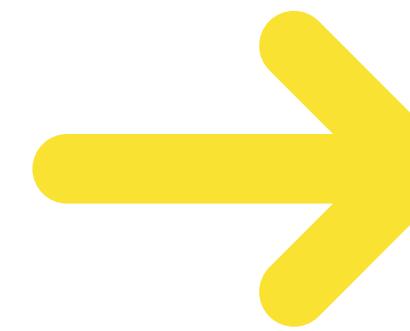
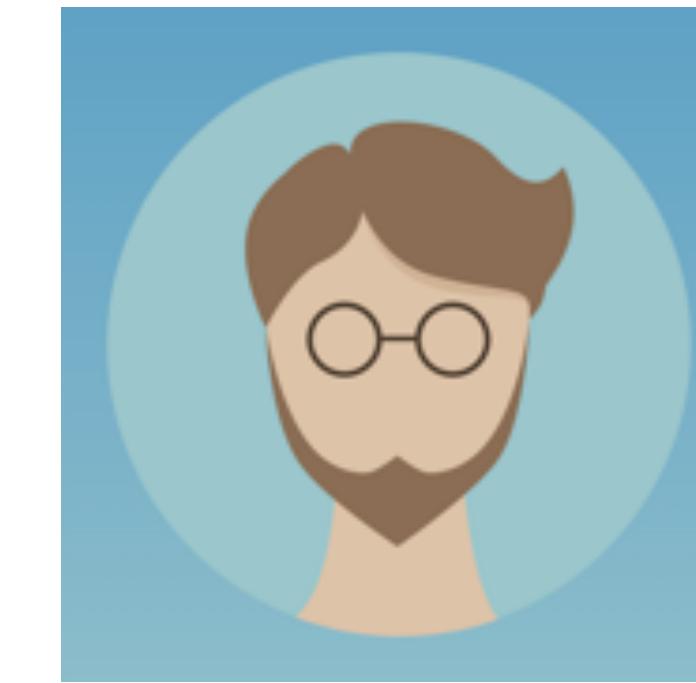
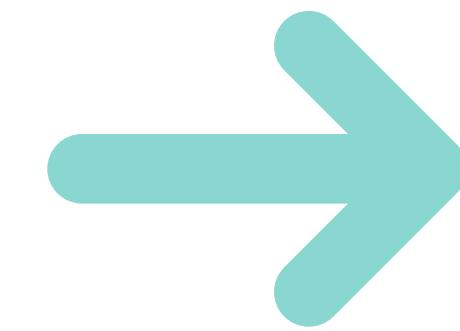


Experimenting with  
vegetables



Real world precision with more categories

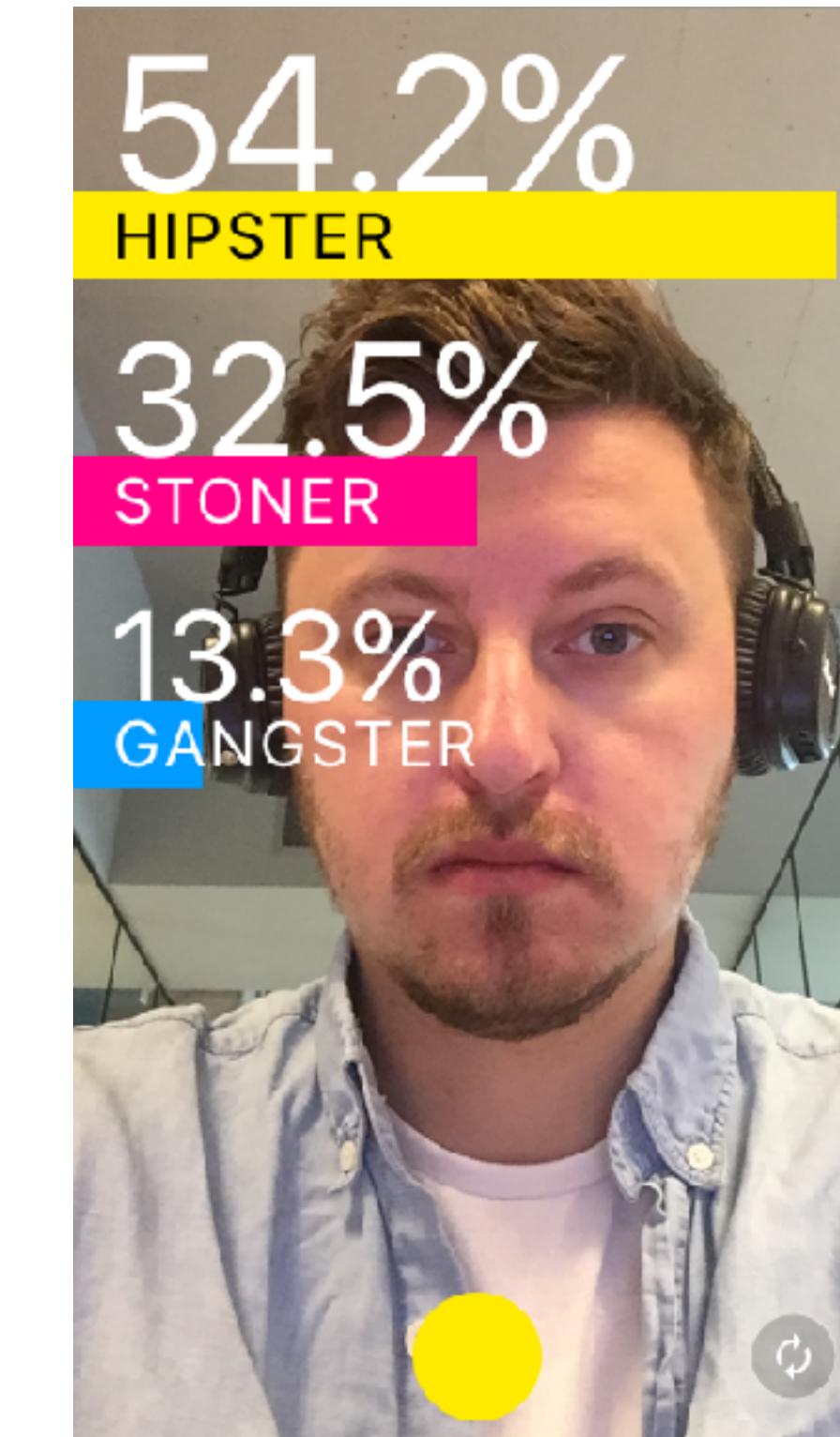
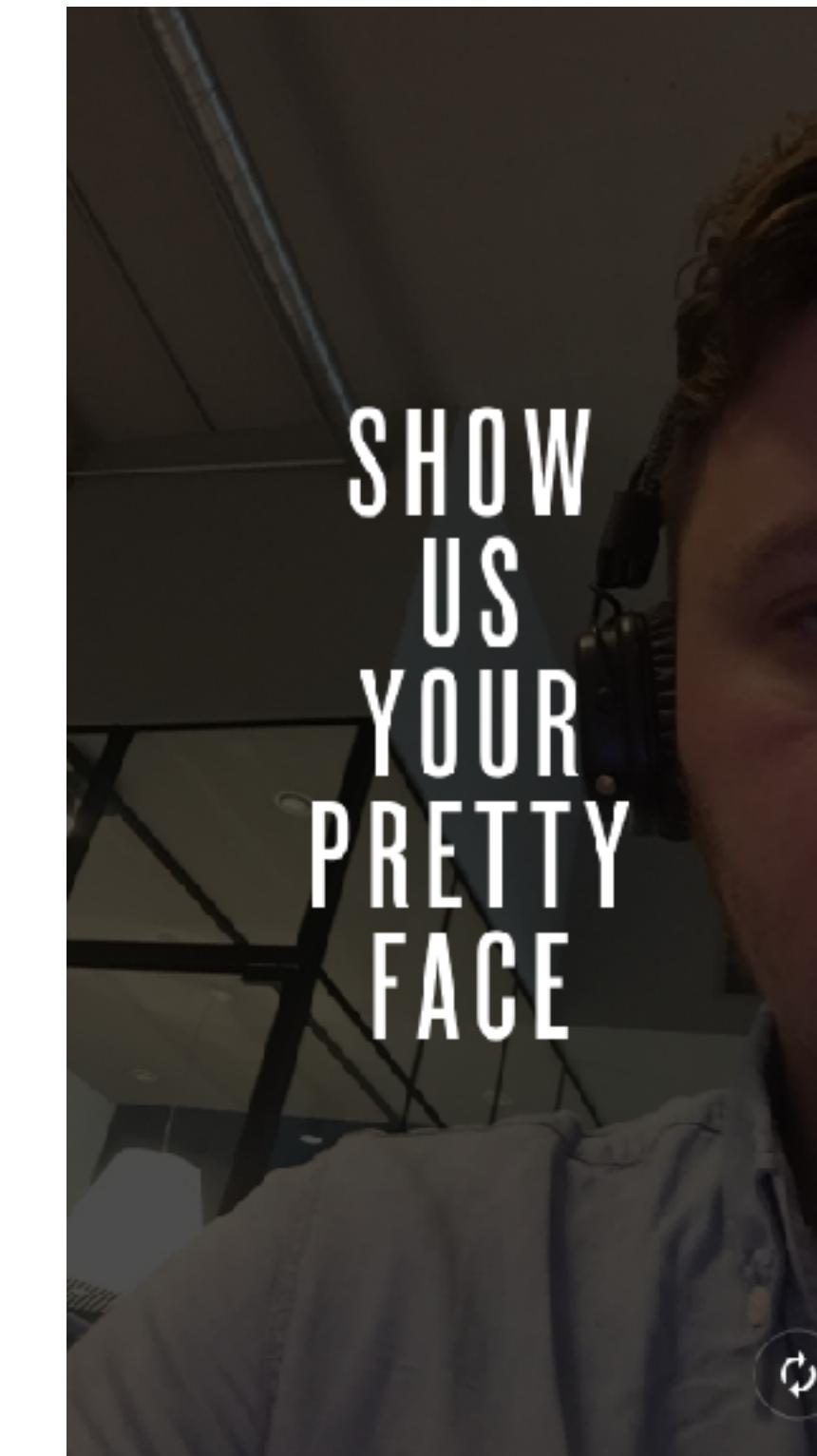
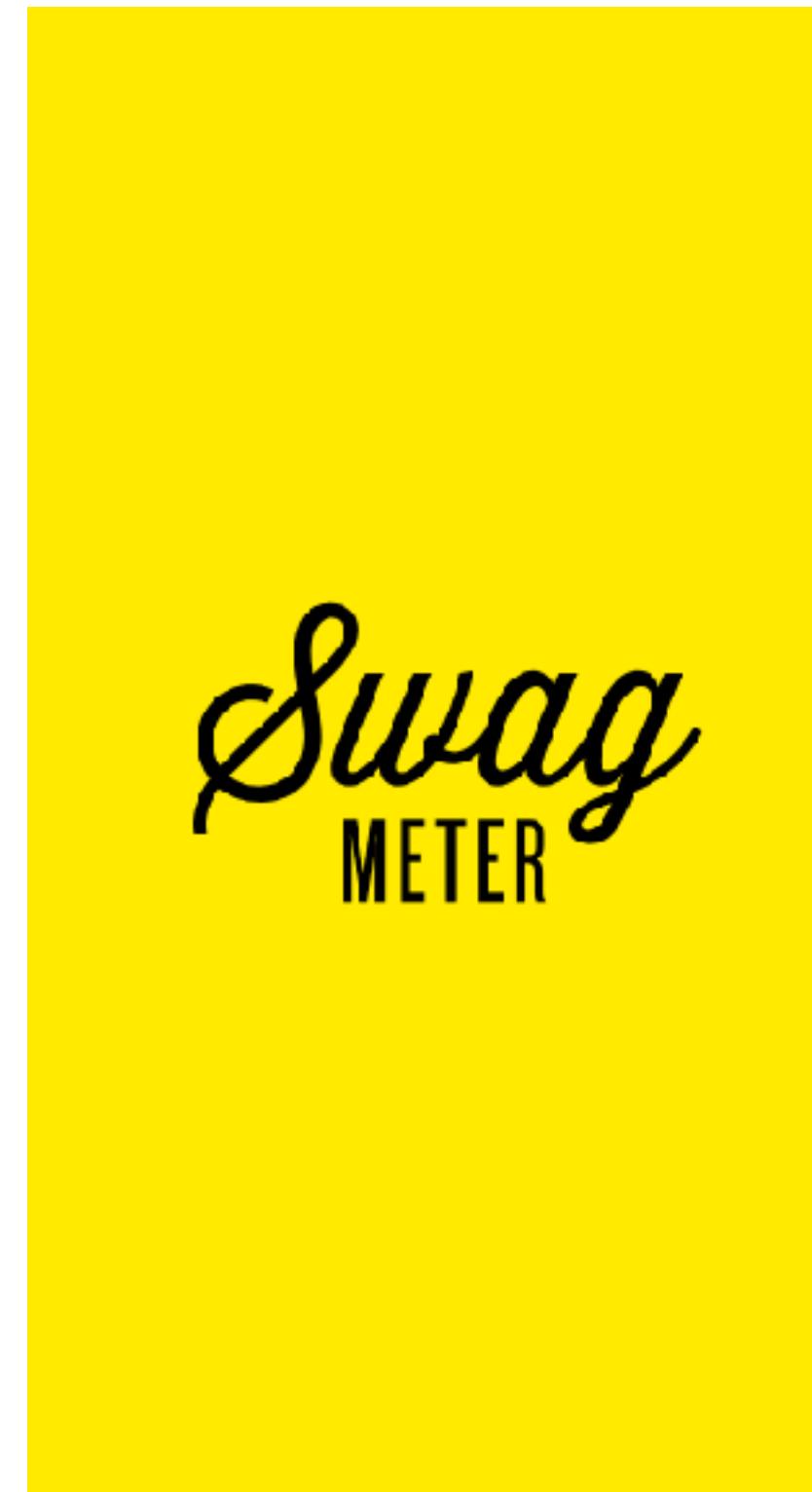
# Demo



Hipsterify

Hipster, much?

*Swag* meter



# Before MLModel



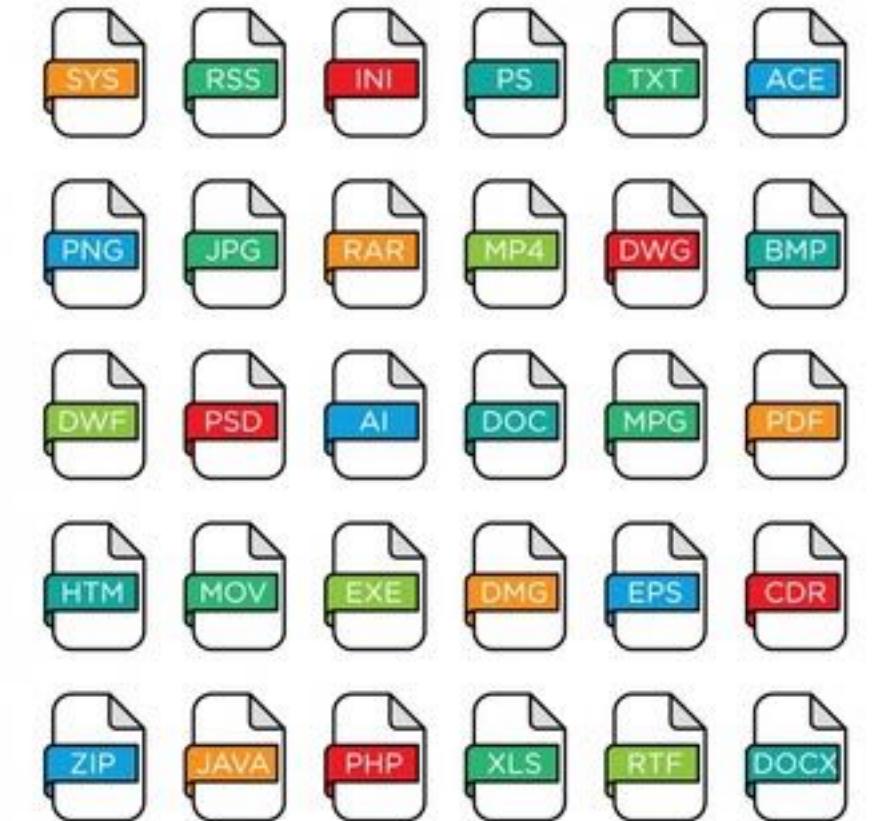
Caffe



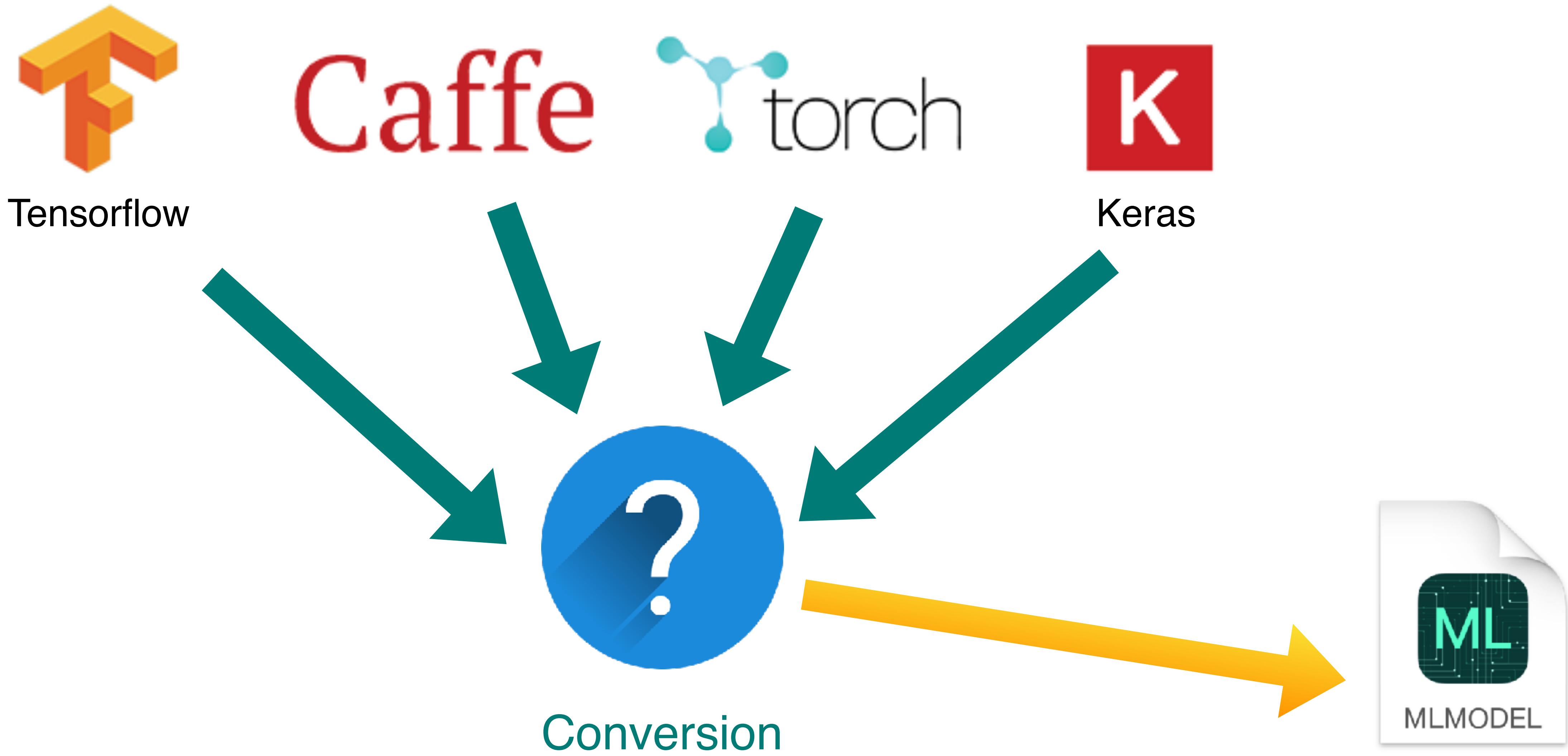
Individual integrations



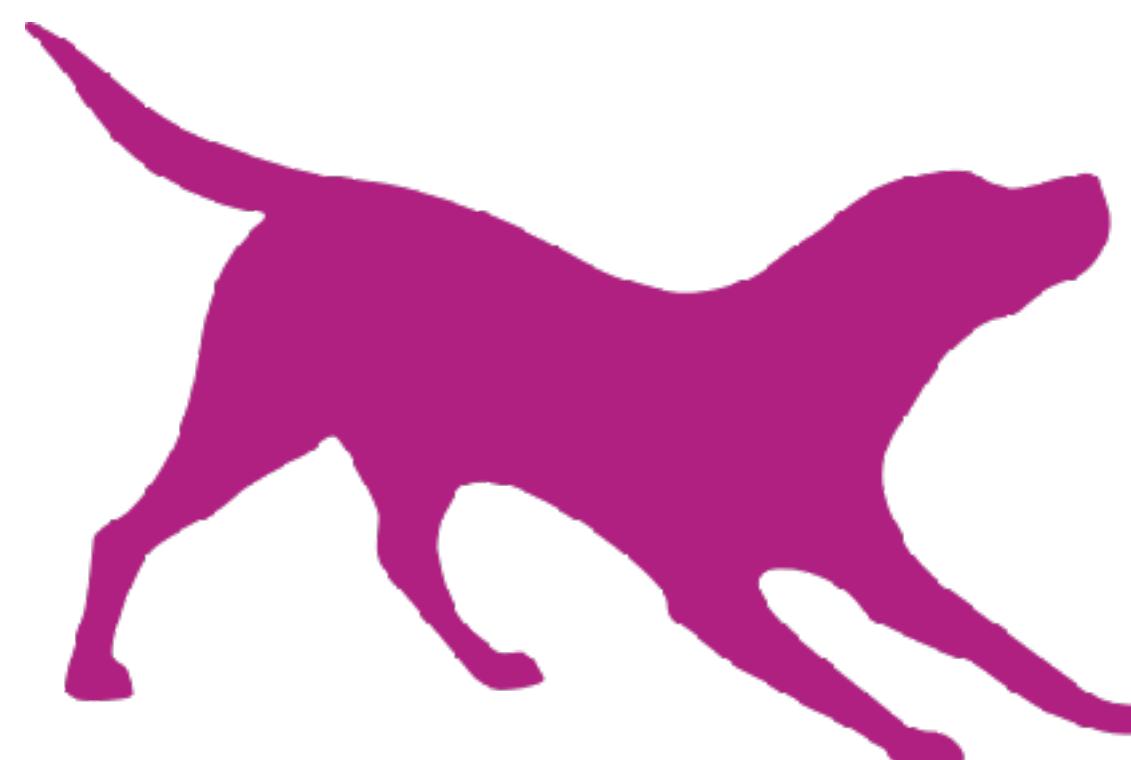
Specific input/output formats



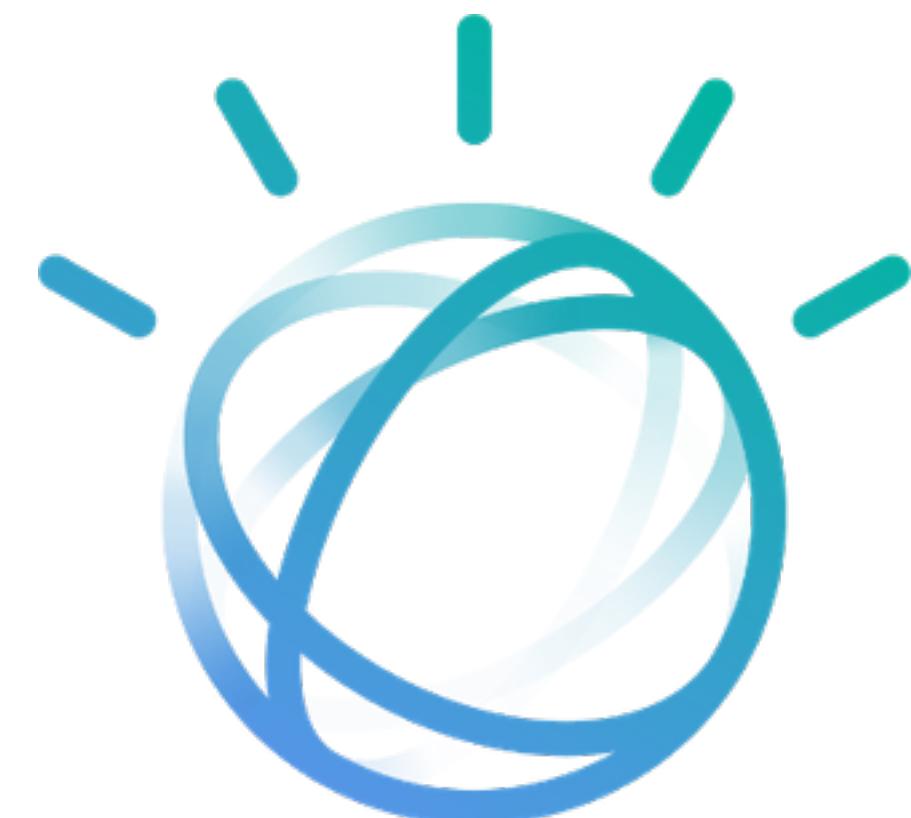
# With MLModel



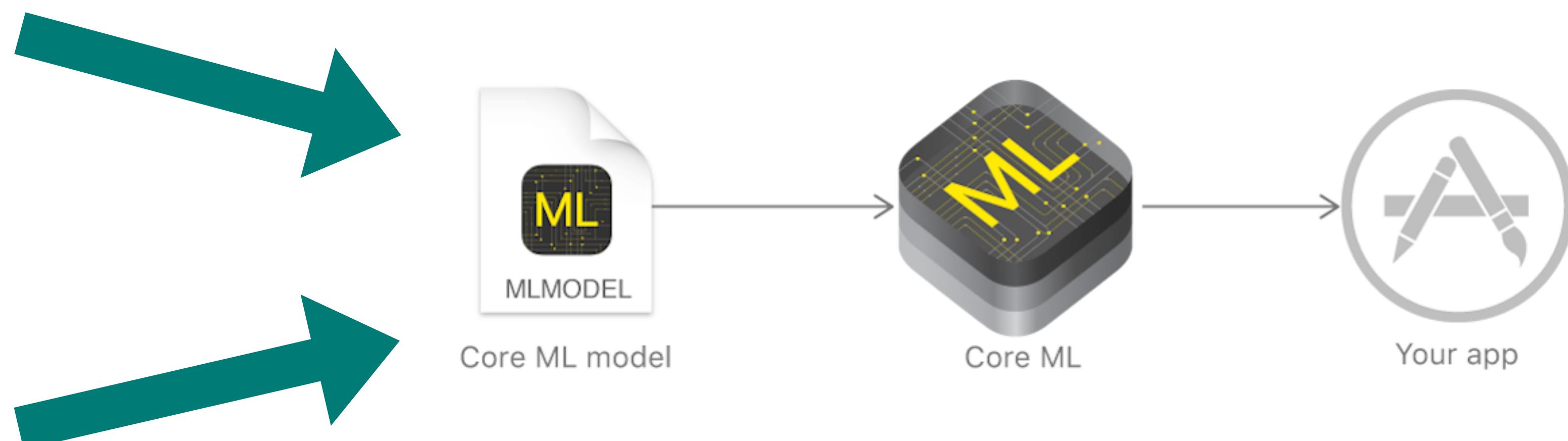
# With MLModel



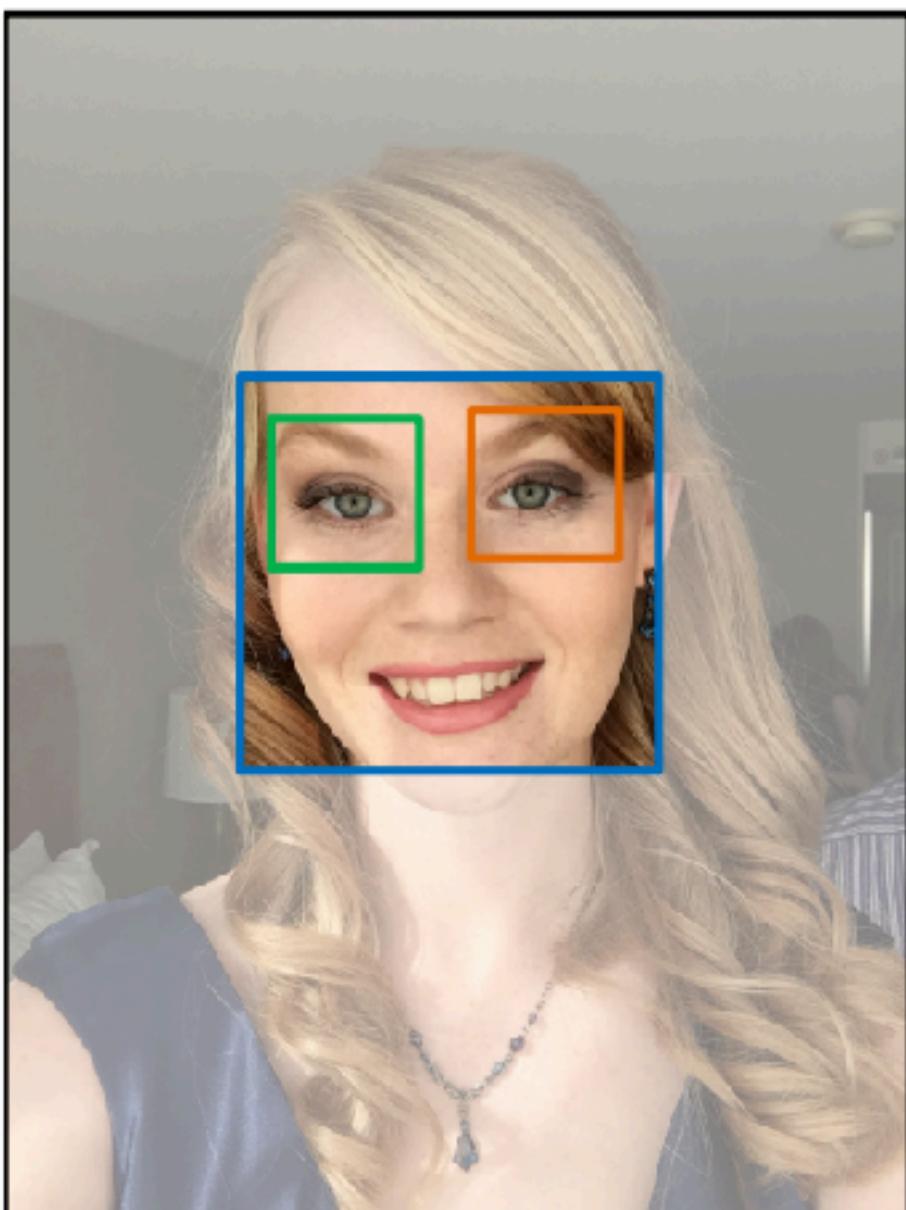
Apple's TuriCreate



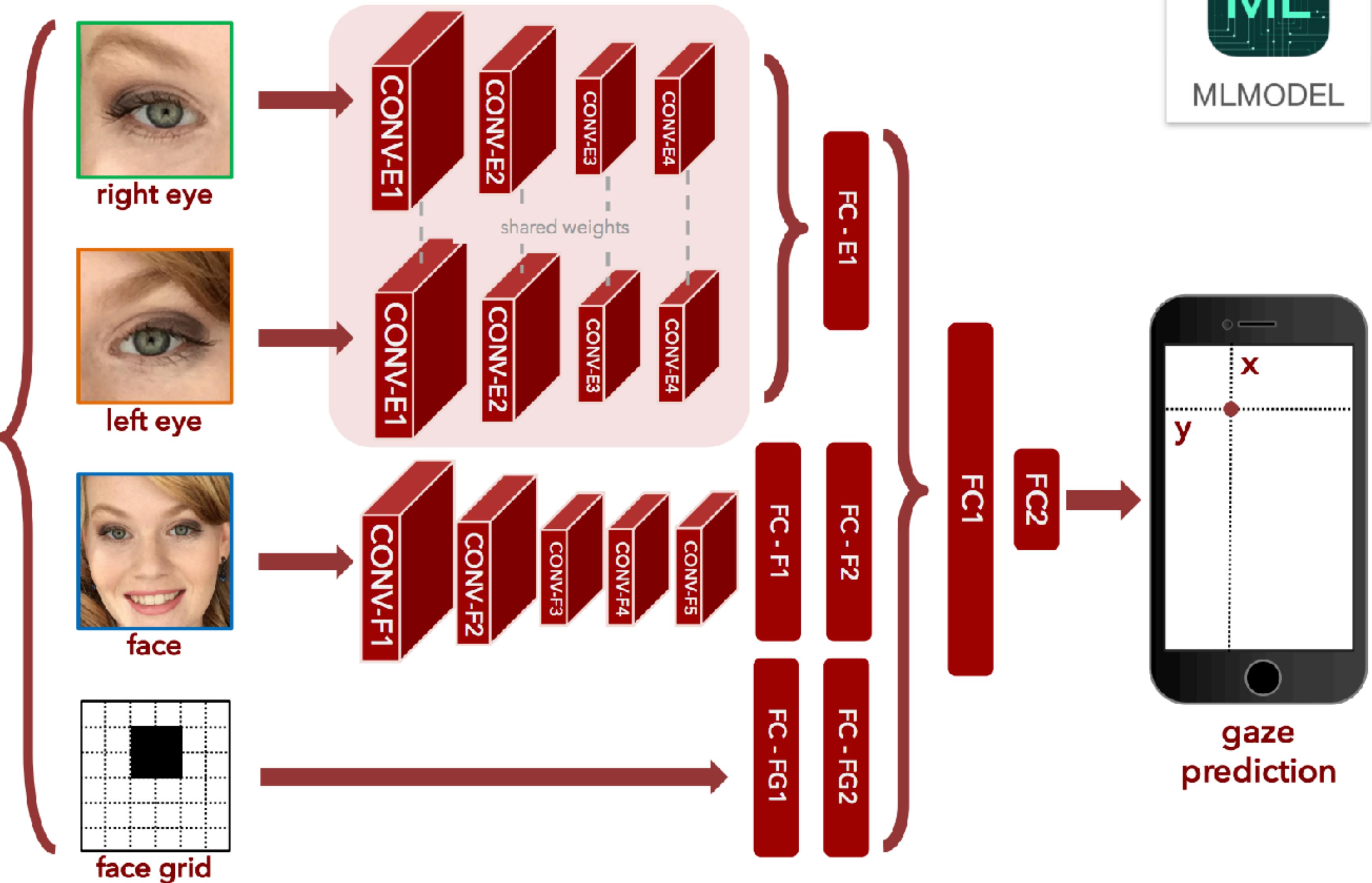
IBM Watson



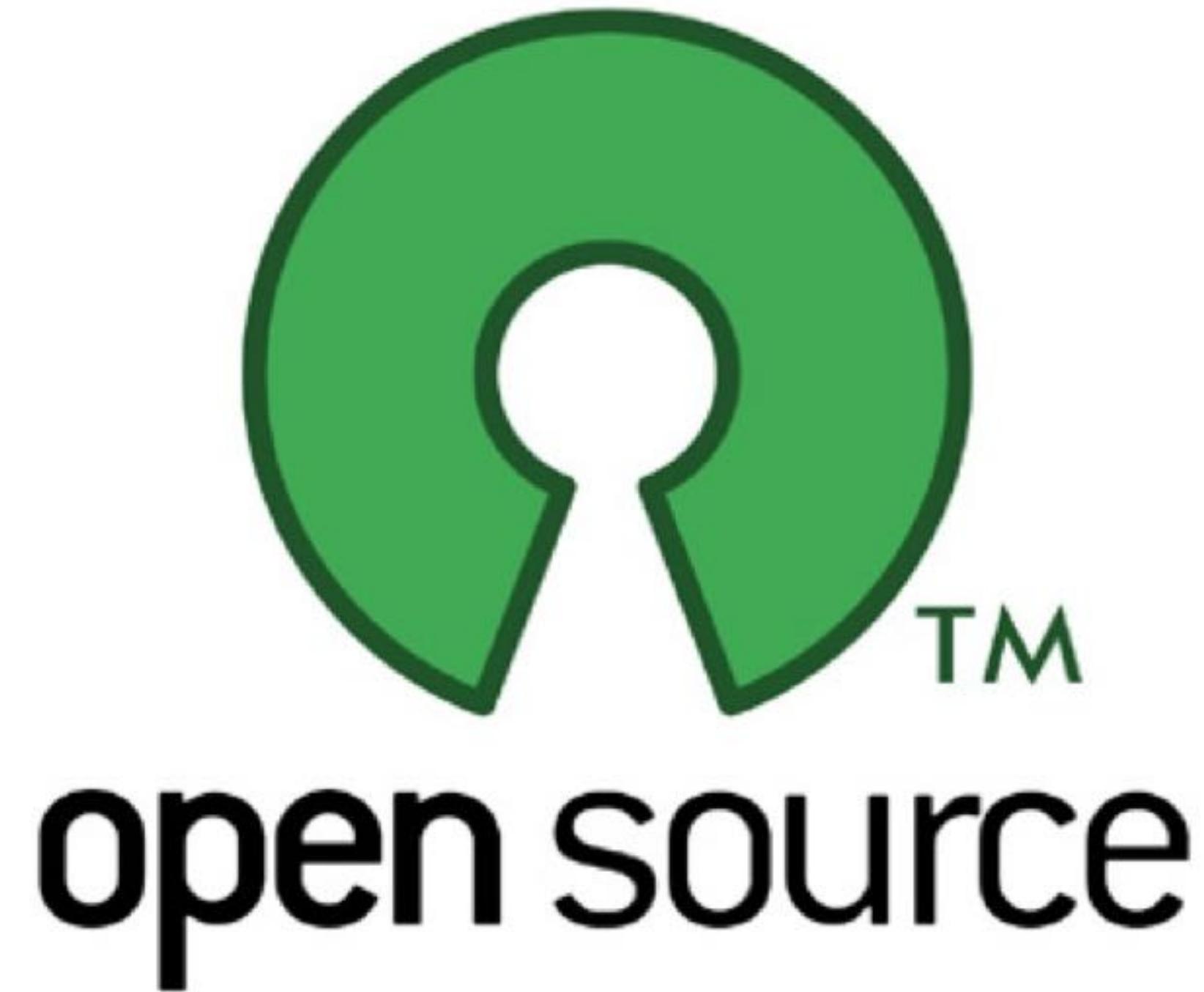
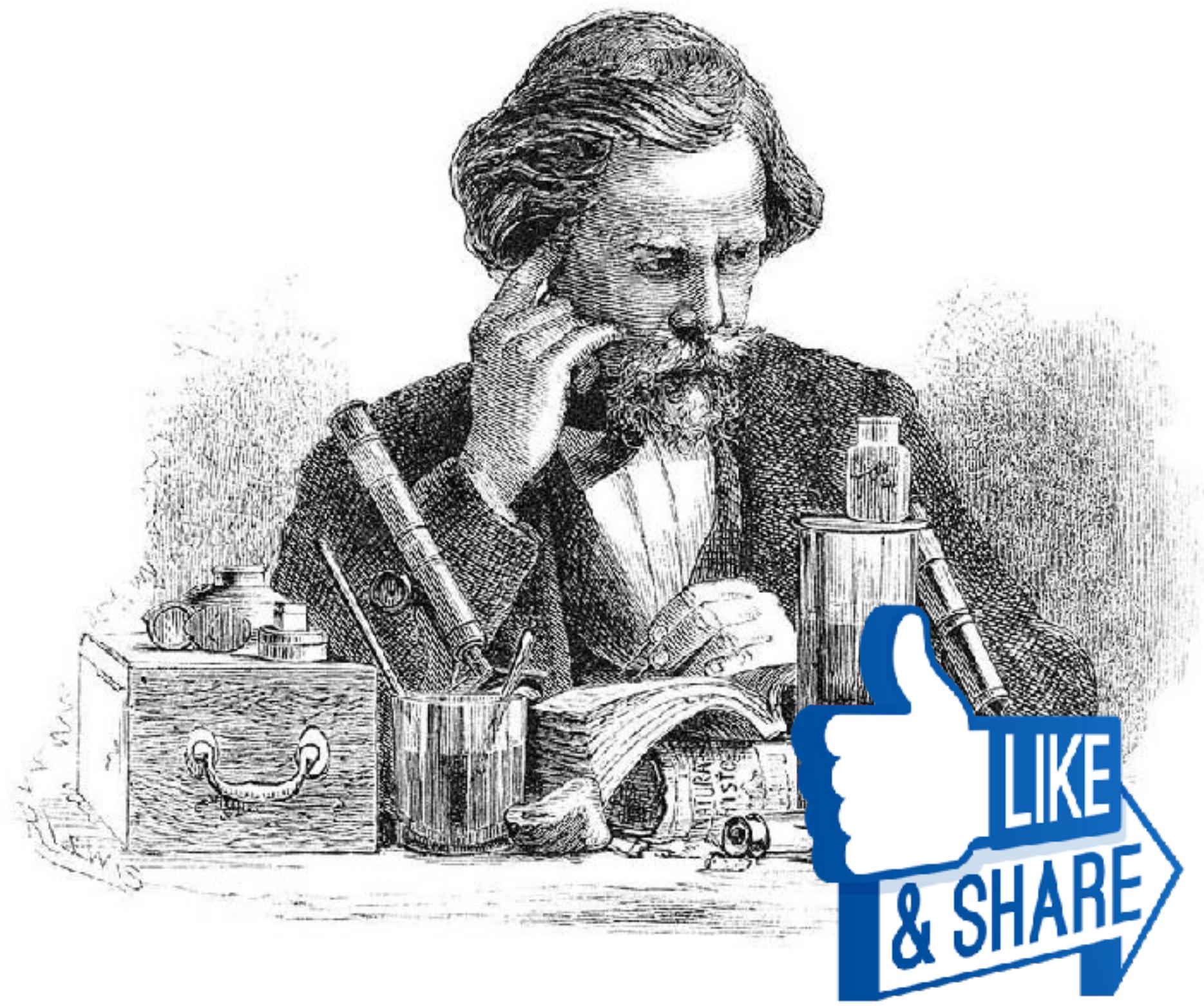
# Caffe



# My current "Moby"



# Resources (Models)

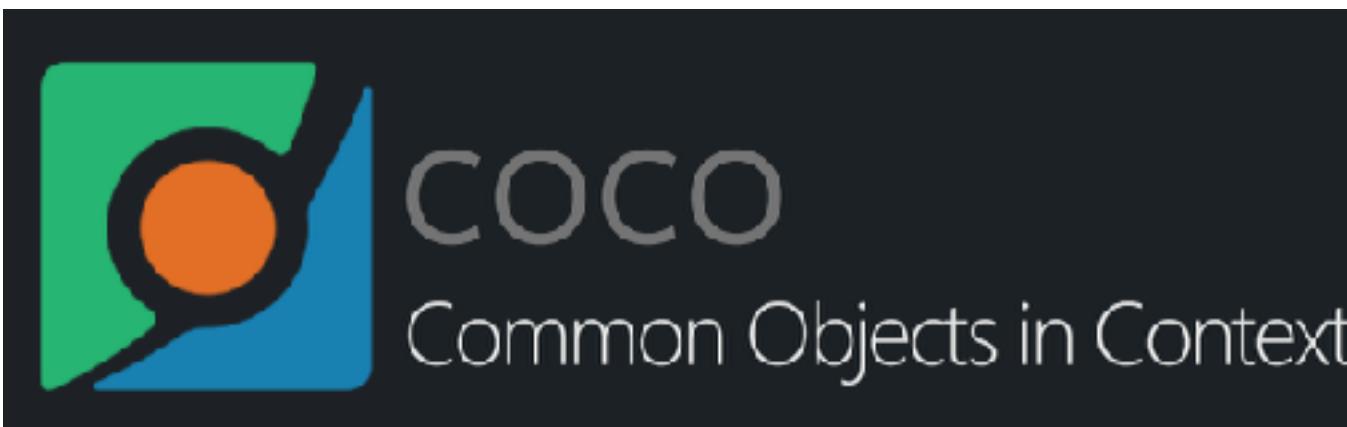


# Resources (Datasets)

**kaggle** 5k+ datasets



city segmentations



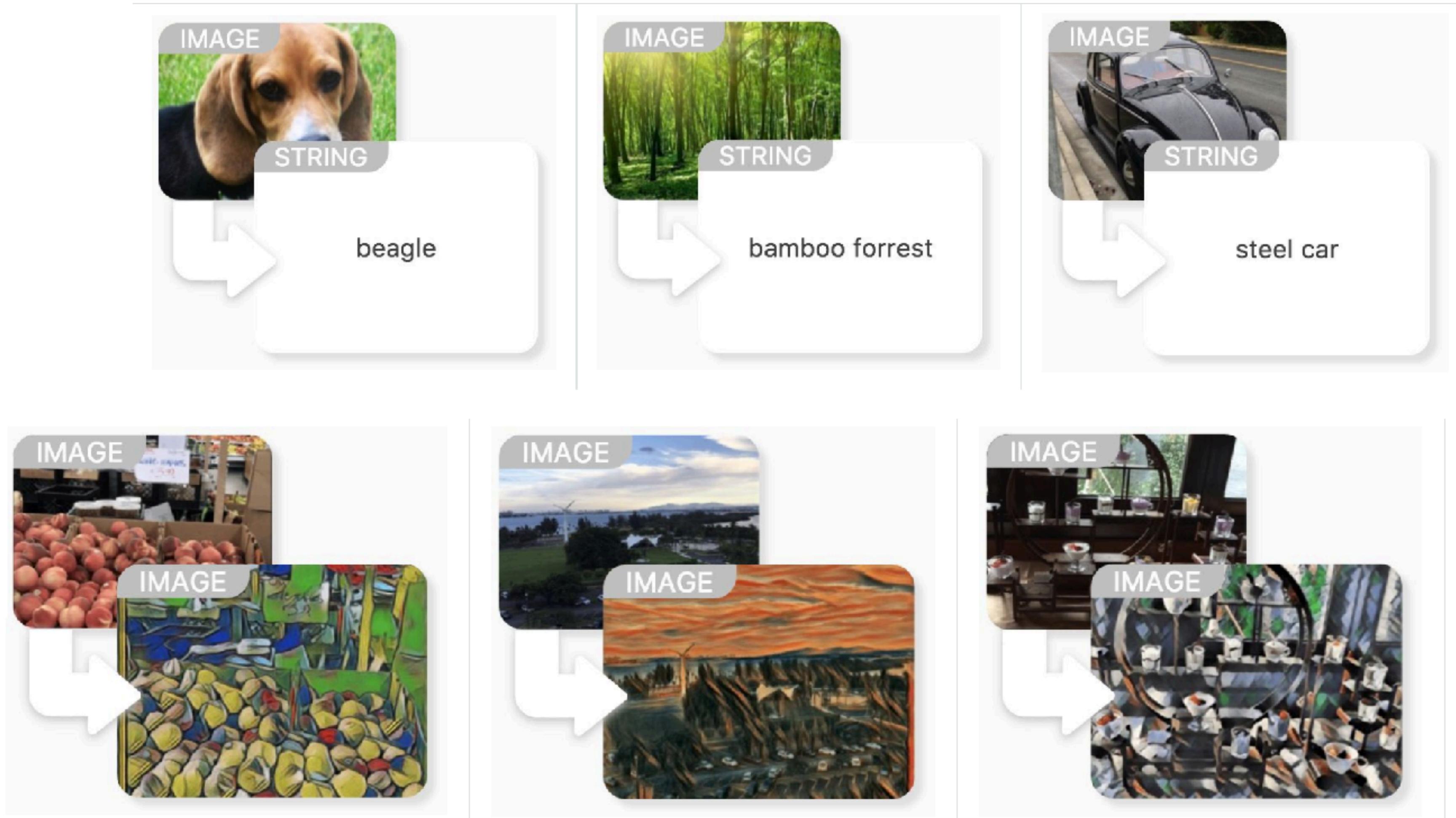
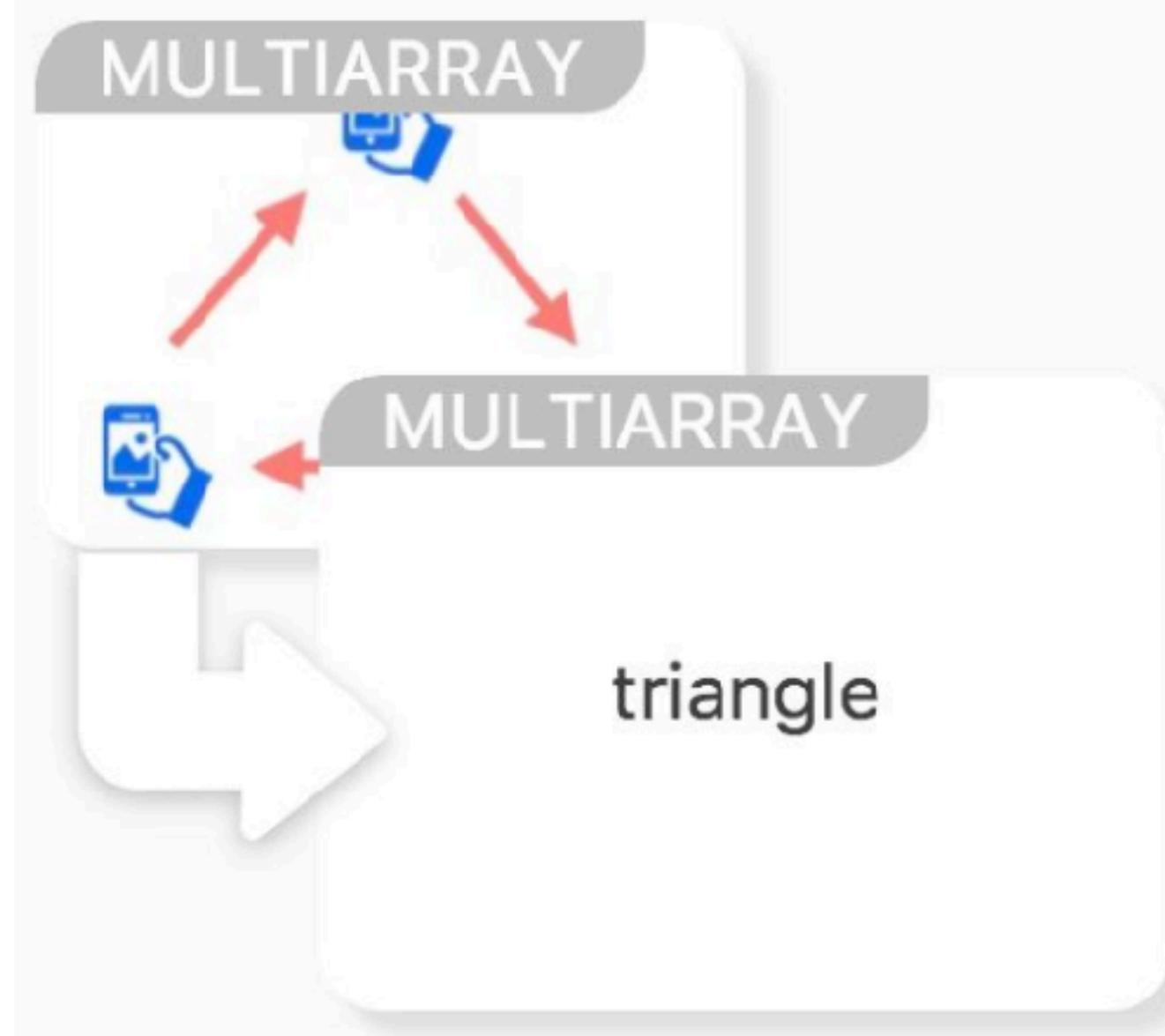
common objects

# Resources (Tools)

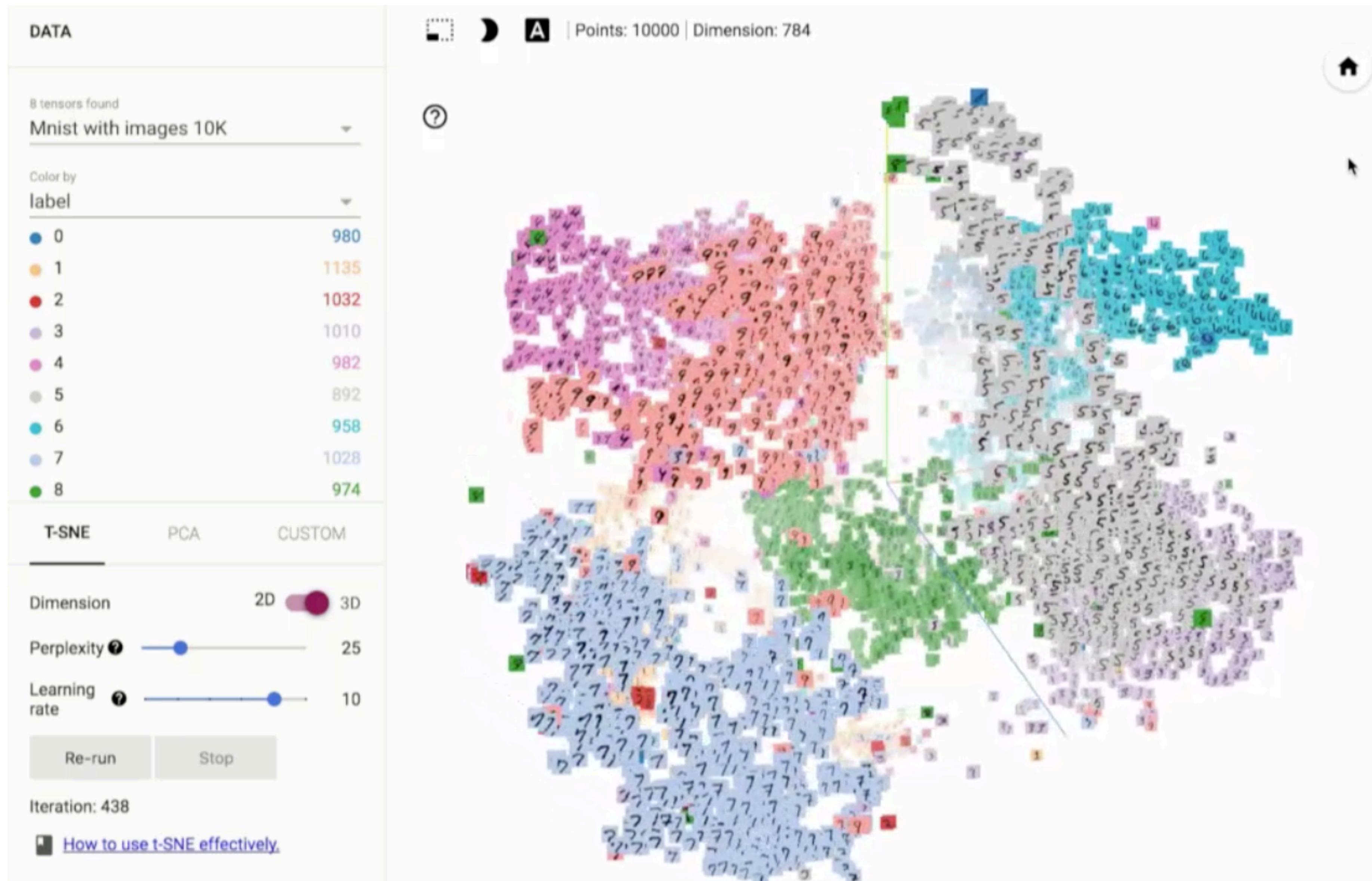


# Resources (Model ZOO)

<https://github.com/likedan/Awesome-CoreML-Models>



# Tensorboard



# Why even bother?

Could run on

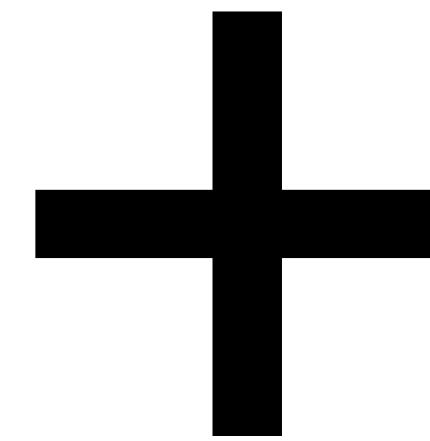


**BUT!**



Specific functionality:  
activity classifier, fast  
response

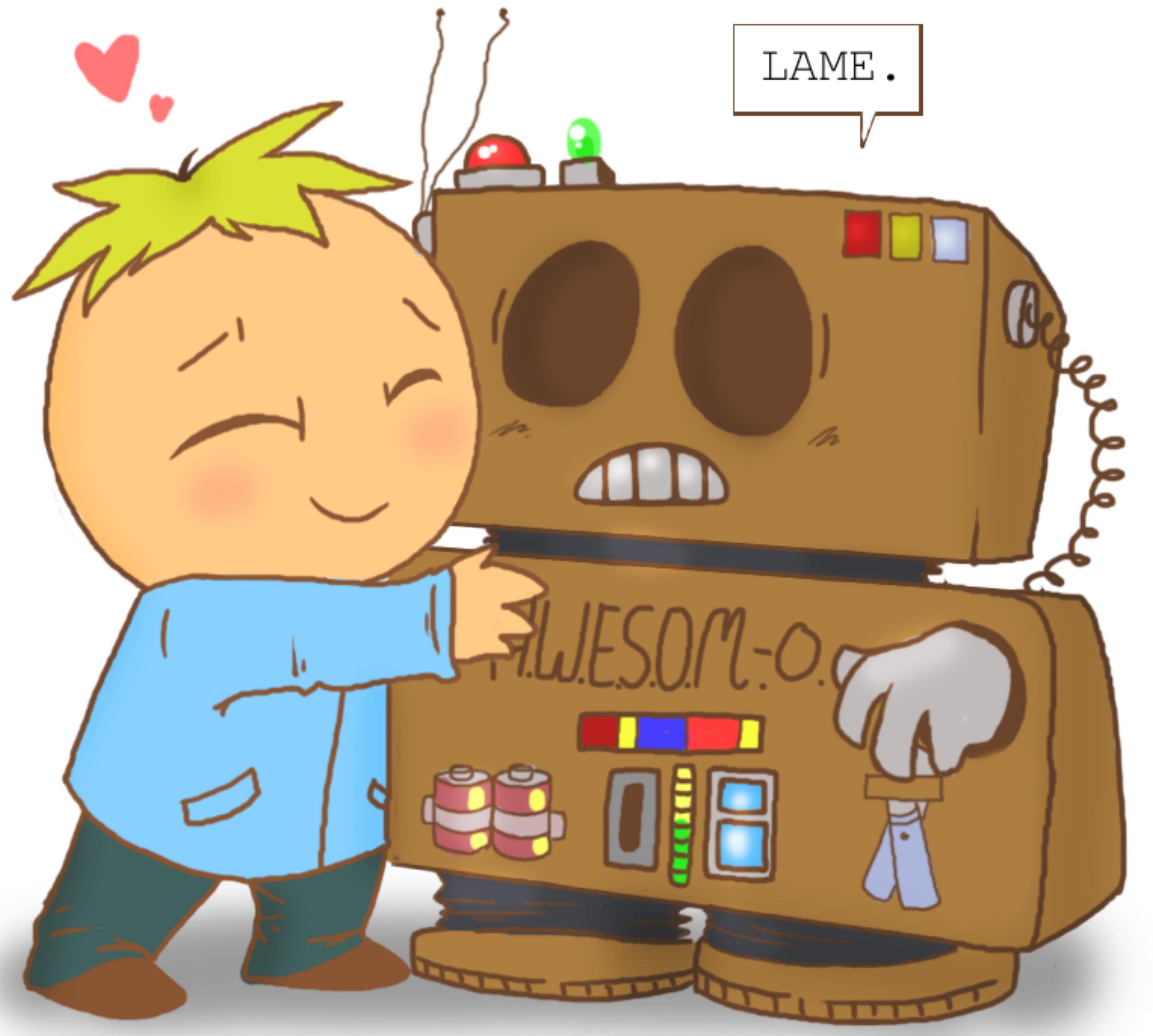
# Tensorflow with Swift



<https://www.tensorflow.org/community/swift>

<https://github.com/PerfectlySoft/Perfect-TensorFlow>

<https://github.com/mortenjust/tensorswift-ios>



WHY TO?

Easy to start

It's the FUTURE

# Thank you

Visit AI Meetups @ Rise Vilnius

## Questions?