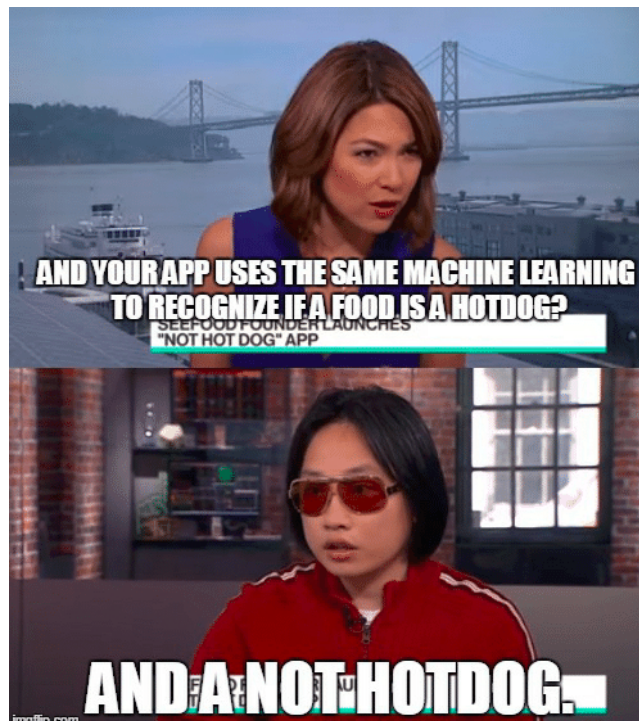# Hotdog/not hotdog
Assignment 1A
Deep Learning in Computer Vision

June 2019

In this exercise you will recreate Jian-Yangs (from Silicon Valley on HBO) infamous hotdog/not hotdog algorithm

https://www.youtube.com/watch?v=pqTntG1RXSY

The sole purpose of the algorithm is to classify images into two classes: hotdog or not hotdog.

Your task is simple; you shall create a convolutional neural network that can this do classification.

DataLoader

We have supplied you with a dataset of images containing either hotdogs or something else, that we got from ImageNet by using the categories: pets, furniture, people, food, frankfurter, chili-dog, hotdog.

We have supplied you with a DataLoader that can load the images from this dataset, and we have already copied the dataset to the servers under `/scratch/hotdog_nothotdog`.

The images all have different resolution and aspect ratios. Be aware that in a forward pass all images must have the same resolution. We supply you with a line of code which is the simplest way of achiecving this - resizing the images to a square image (squishing the image if it is not already square). Note that this is not necessarily the best way of achieving this goal and you are free to do it however you please.

CNN

Design and train a CNN to do the classification task, evaluate its performance, and document the process. Questions you might answer could be:

- How did you decide on your architecture? Did you start out with something else? How/why did you decide to change it?

- How did you train it? Which optimizer did you use? Did you compare using different optimizers? Did you do other things to improve your training?

- What is the accuracy of your network? Which test images are classified wrong? Any of them for obvious reasons?