**Slide 3 :**

Problem that we are tackling was brought up by Agricultural school here at IPB:

\* Its a Classification problem of images that seem to not be destinguashble even by our eyes , and as Nuno Rodrigues told me they have been using many manual techniques as measuring different sizes and applying some dimentiolitty reduction like PCA to be able to classify them

**Slide 4:**

First Paper : \*Scalabicclity \*Deployment\*Inference \*Cost of realization

Second Paper :

\* The problem is bit different (difference between classes is identifiable by human eye )

\* Features were been set manually (Major Axis Length, Radius, Roundness)

\*Expert Human intervention required in all steps

\* Only reusable part is the neuralNetwork

Forboth:

\* They didn't release the code/deploy a software for it

**Slide 5:**

\* That's how all primates works

There were lot of discussions around supervised learning , but the base of the learning is data , we might don't know how to the brain connects different data and how it makes abstraction/anologies .. but I believe that the base of the learning is data

\*We Collected with the help of agricultural school and labelled 16 classes of almonds with about 3000 image

\* messy data \* Remove unneeded dimensions

\* label data since we are using supervised models \* save us training time

\* better generalization

**Slide 6:**

1.The blur, or smoothing, of an image, removes “outlier” pixels that may be noise in the image

2. To help separate the actual object from the background since the background is white

3.Canny edge detection is a technique to extract useful structural information

from different vision objects and dramatically reduce the amount of data to

be processed.

4. Dilation, it is one of the basic operations

in mathematical morphology , It uses a structuring element for probing and expanding

the shapes contained in the input image

5.To extract just the main feature of the almond in this case we are using the biggest countours

**Slide 7 :**

Iteration 3 : ImageNet model September 10, 2012. Training took 5 days , that's why we thought that if we reduce the size the learning will be more efficient and faster

Iteration 4: one day of training and better accuracy