



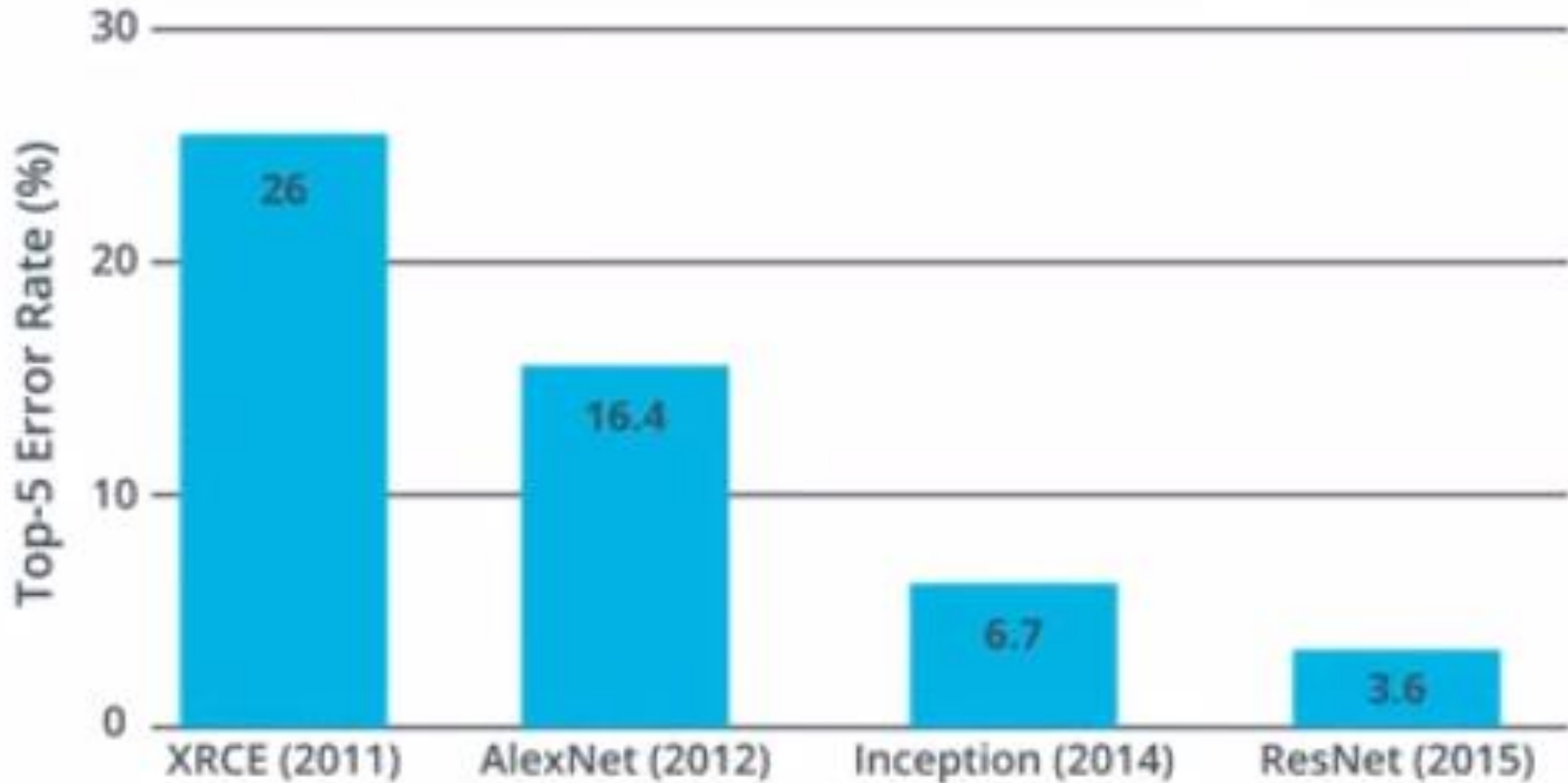
# Deep Learning Future approaches

Internal course  
Medical Physics



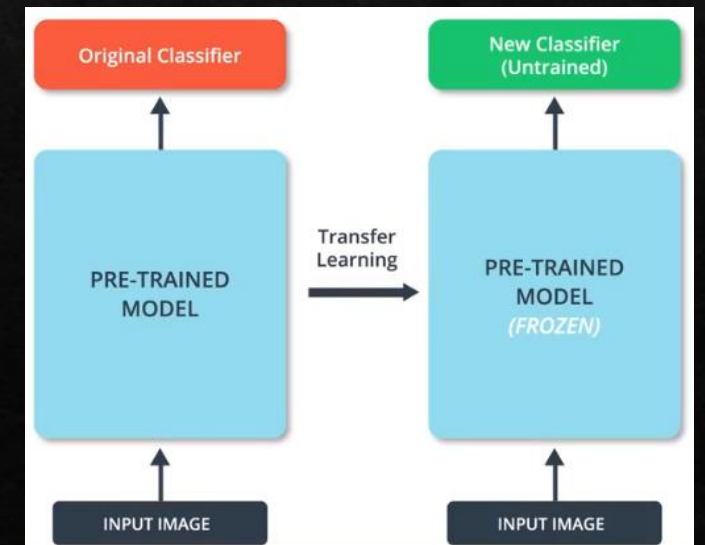
# IMAGENET – Large Scale Visual

CLASSIFICATION Task Results



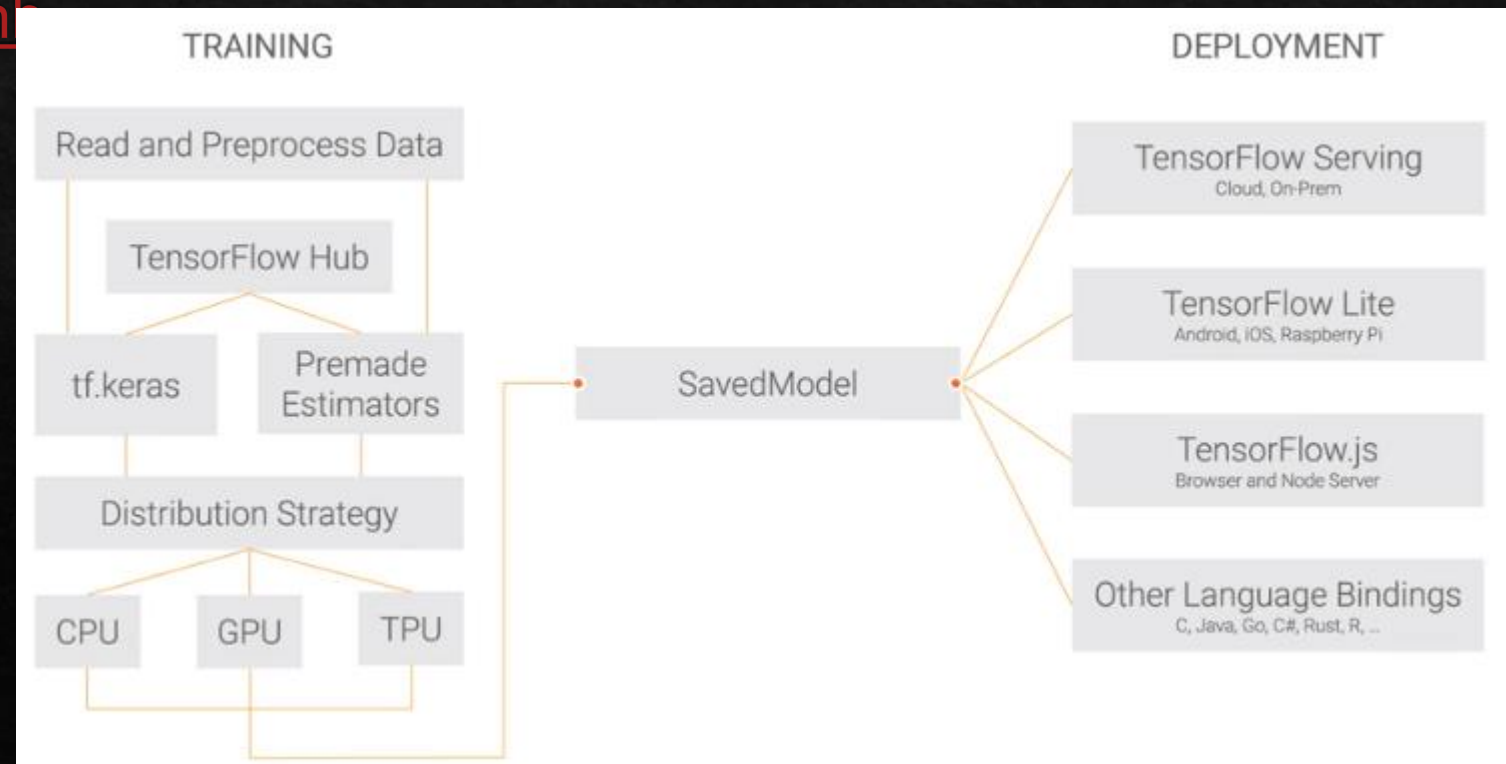
# Transfer Learning

- ◆ AIM: to take advantage from pre-trained CNNs adapting the model to your dataset changing only last layer (Output layer)
- ◆ IMPORTANT: DO NOT CHANGE THE PRETRAINED PART OF THE MODEL  
→ SET THIS PART OF THE MODEL TO “NON-TRAINABLE” (*FREEZING THE MODEL*)
- ◆ BENEFIT: Significant decrease in training time.



# TensorFlow Hub

- ◇ [TensorFlow Hub](#)
- ◇ [https://colab.research.google.com/github/tensorflow/examples/blob/master/courses/udacity\\_intro\\_to\\_tensorflow\\_for\\_deep\\_learning/l07c01\\_saving\\_and\\_loading\\_models.ipynb](https://colab.research.google.com/github/tensorflow/examples/blob/master/courses/udacity_intro_to_tensorflow_for_deep_learning/l07c01_saving_and_loading_models.ipynb)



# U-net

- ◇ U-Net: Convolutional Networks for Biomedical Image Segmentation
- ◇ <https://lmb.informatik.uni-freiburg.de/people/ronneber/u-net/>



# Ideas

◇ ...