Deep Learning for Computer Vision assignment

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Results

Model	**Validation accuracy on last round**	**Time for training and validation**
googLeNet	1.0	5m
resNet	1.0	5m 21s
alexNet	0.5625	3m 27s
denseNet (v.201)	0.9375	14m

Comments

The aim of this assignment was the study of some models from the pytorchmodel zoo website. First, we created a dataset of 4 classes; in our case we considered: *cars, furnitures, moto, fruits*. For each one we have downloaded 12 images from Internet and divided in two groups: training set (composed of 8 images) and validation set (composed of 4 images). Since the total number of images was low, we decided to use *data augmentation* over training and evaluation set. In all models we trained and evaluated for 25 epochs with our dataset; more specifically what we have done is called *finetuning* of a pretrained model with our images. We downloaded pretrained models and changed the last fully connected layer output to the desired number of classes, in our case 4. The used models are the following:

- googLeNet
- resNet
- alexNet
- denseNet

As we can see in the above table, most of the models obtained a high accuracy over the validation set in the final epoch. In this experiment alexNet performed poorer than any other model but the execution time was faster than the others.