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## Assignment Sheet Nr. 5

**Network design 1: CN-Network**

Batch size	64
Epochs	30
Learning rate	0.1
Weight decay	0.001
Learning decay	0.1 @ 10 epochs
final validation loss	<0.0001

**Layers**

1. CONV-Layer1:
  - Conv2D(3, 8, kernel\_size=11, stride=4)
  - ReLu
  - MaxPool(kernel\_size=3, stride=2)
2. CONV-Layer2:
  - Conv2D(8, 32, kernel\_size=5, padding=2)
  - ReLu
  - MaxPool(kernel\_size=3, stride=2)
3. CONV-Layer3:
  - Conv2D(32, 64, kernel\_size=3, padding=1)
  - ReLu
  - MaxPool(kernel\_size=2, stride=2, padding=1)
4. CONV-Layer4:
  - Conv2D(64, 64, kernel\_size=3, padding=1)
  - ReLu
5. CONV-Layer5:
  - Conv2D(64, 64, kernel\_size=3, padding=1)
  - ReLu
  - MaxPool(kernel\_size=3, stride=2)
6. FC-Layer6:
  - Linear(128+1, 1)

For every picture we computed the mean over every pixel value in each channel(RGB) and the standard deviation of every channel (as a improvised measure of contrast) and fed it as input to a linear layer, which took these 6 inputs and connected them to 1 output. This output was used as an input for the last layer. The idea was to increase the prediction accuracy with the help of image features as predictors. (source: AlexNet)