Convolutional Neural Networks
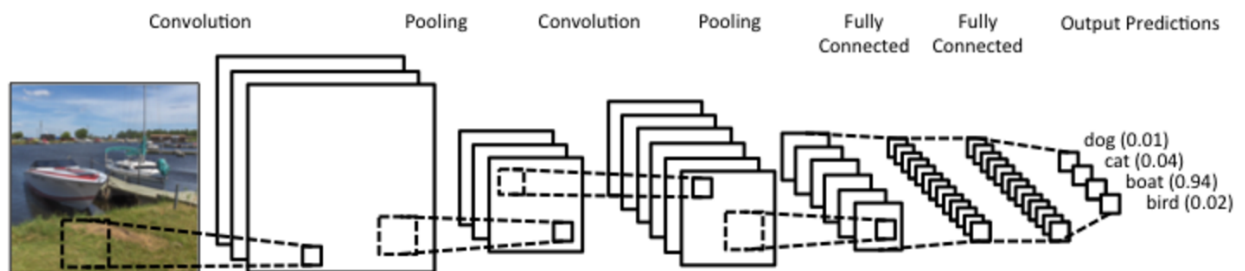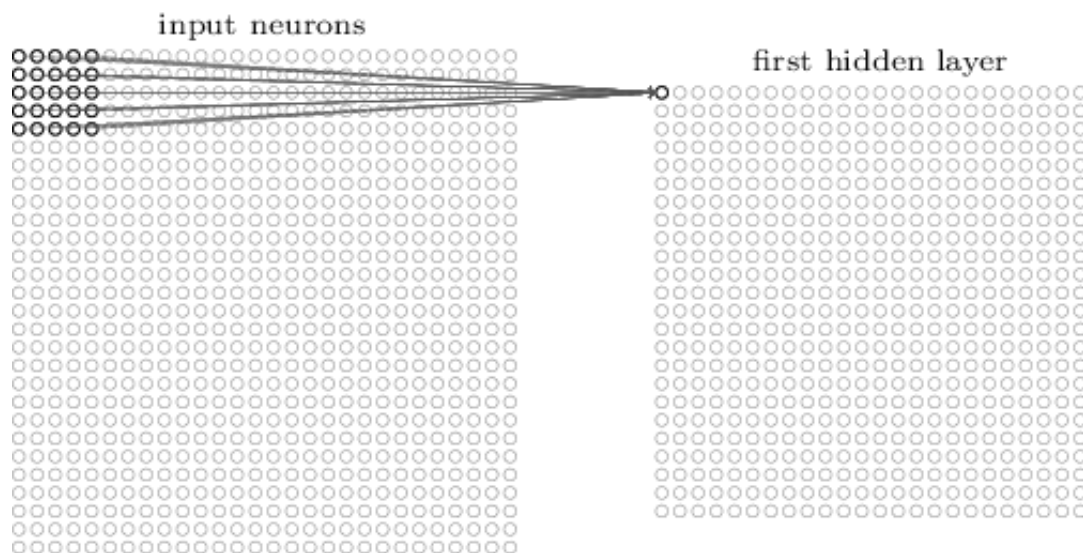

1. Model

convolution:

pooling:

hidden neurons (output from feature map)

max-pooling units

combination:

28 × 28 input neurons

3 × 24 × 24 neurons

3 × 12 × 12 neurons

2. CNN in NLP

wait
for
the
video
and
do
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rent
it

n x k representation of
sentence with static and
non-static channels

Convolutional layer with
multiple filter widths and
feature maps

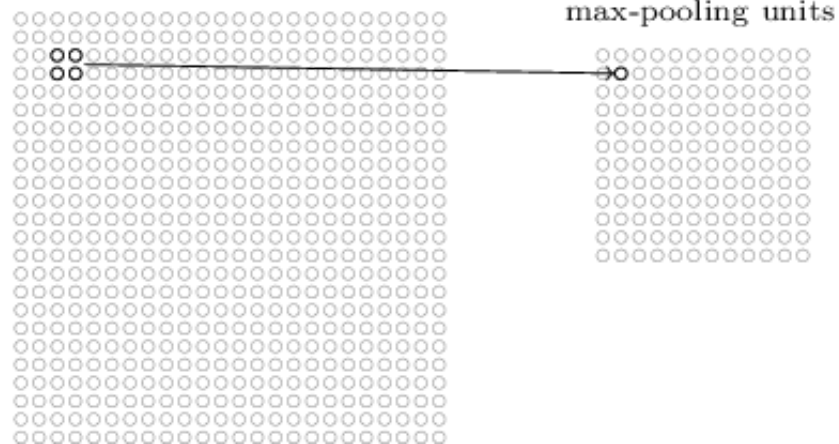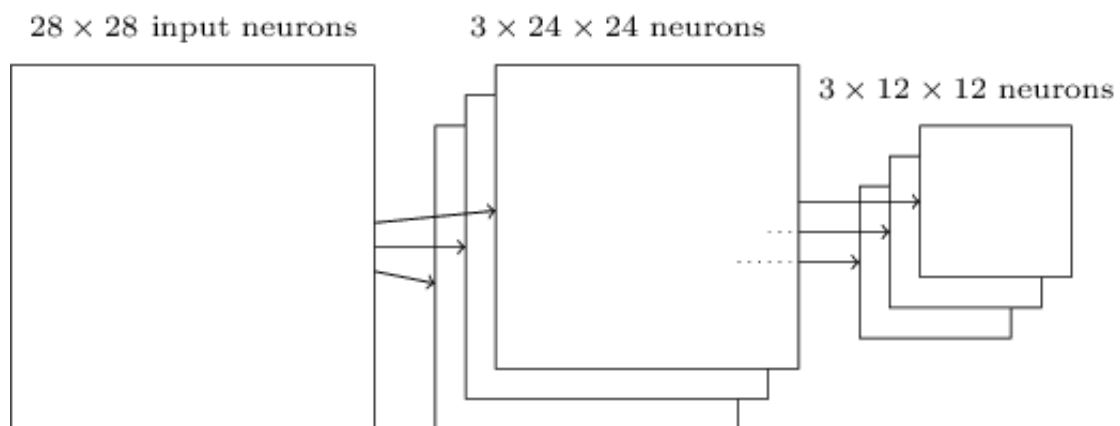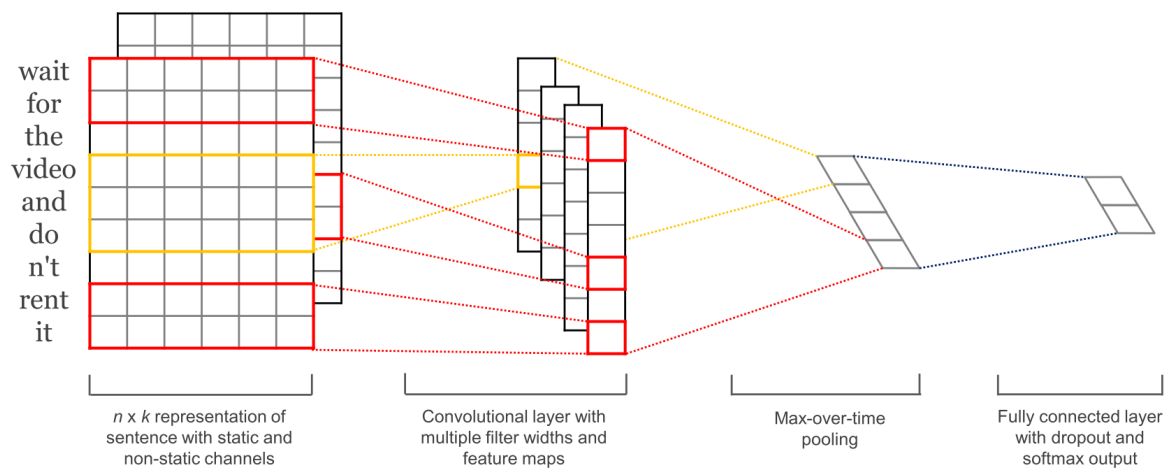Max-over-time
pooling

Fully connected layer
with dropout and
softmax output

Convolutional Neural Networks for Sentence Classification [1]

result:

Model	MR
CNN-rand	76.1
CNN-static	81.0
CNN-non-static	**81.5**
CNN-multichannel	81.1

Reference

1. **Yoon Kim. Convolutional Neural Networks for Sentence Classification. EMNLP 2014**

   http://www.people.fas.harvard.edu/~yoonkim/data/emnlp_2014.pdf