

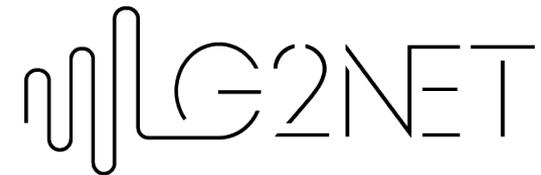
# Convolutional Neural Networks

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# Few notes

Some of you found problems with whitening the data and generating nicely looking spectrograms. Don't worry!

The most important for you is to try algorithms on the data as they are. You can think about this approach as applying **Deep Learning on raw, unprocessed data**. :)



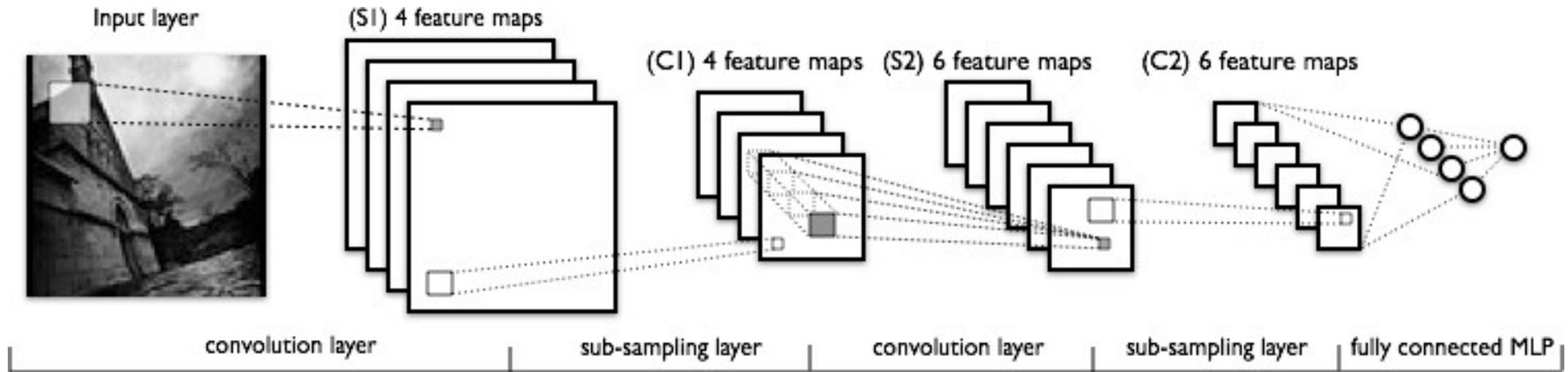


Or hard?



LG2NET

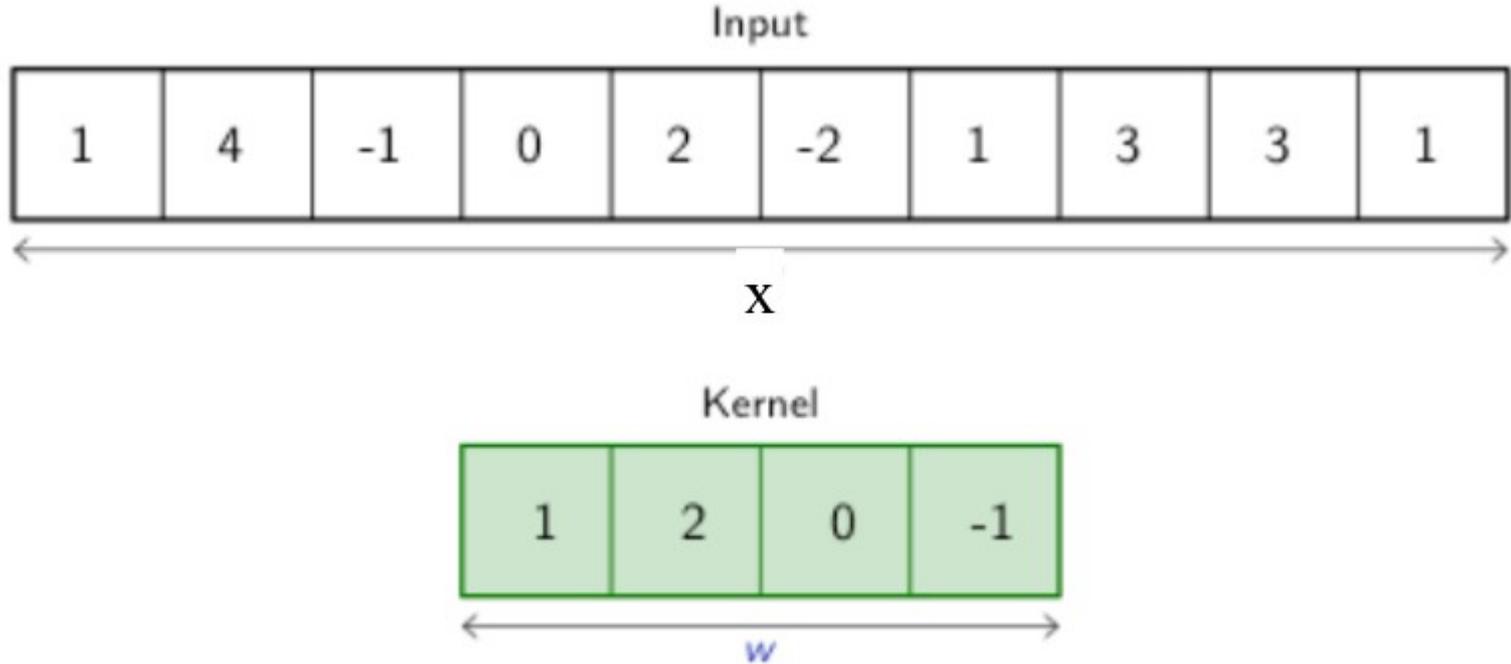
# Convolutional Neural Network



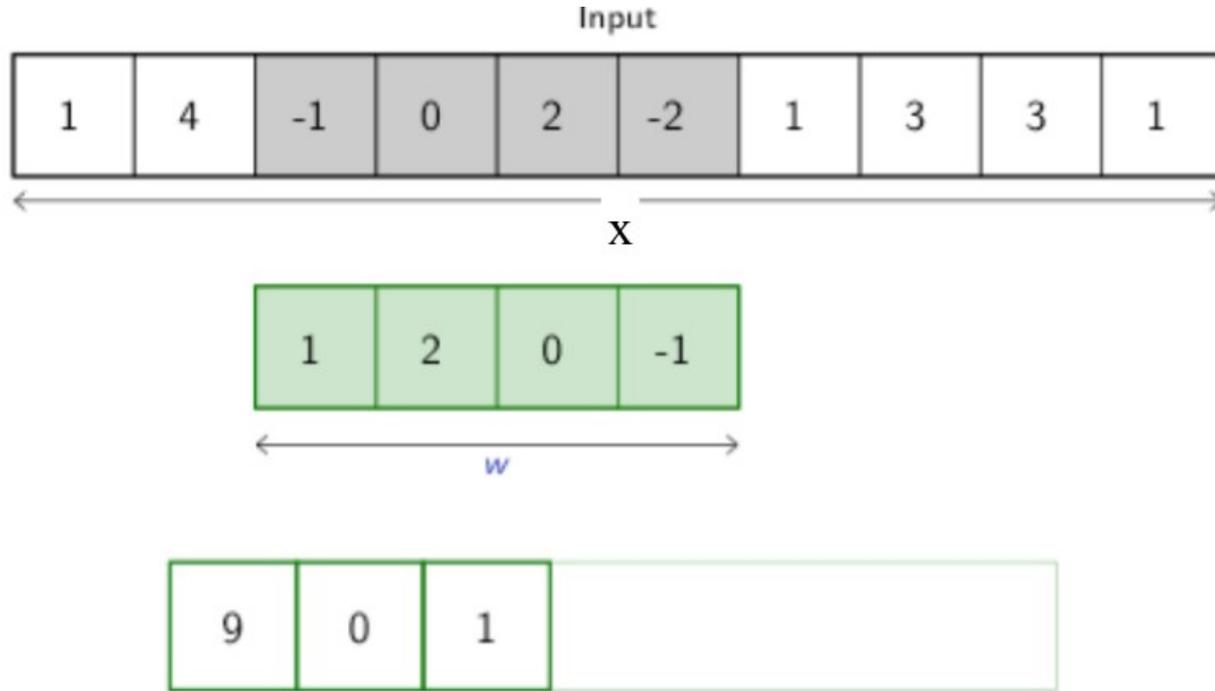
Convolutional Layer – Feature extractor



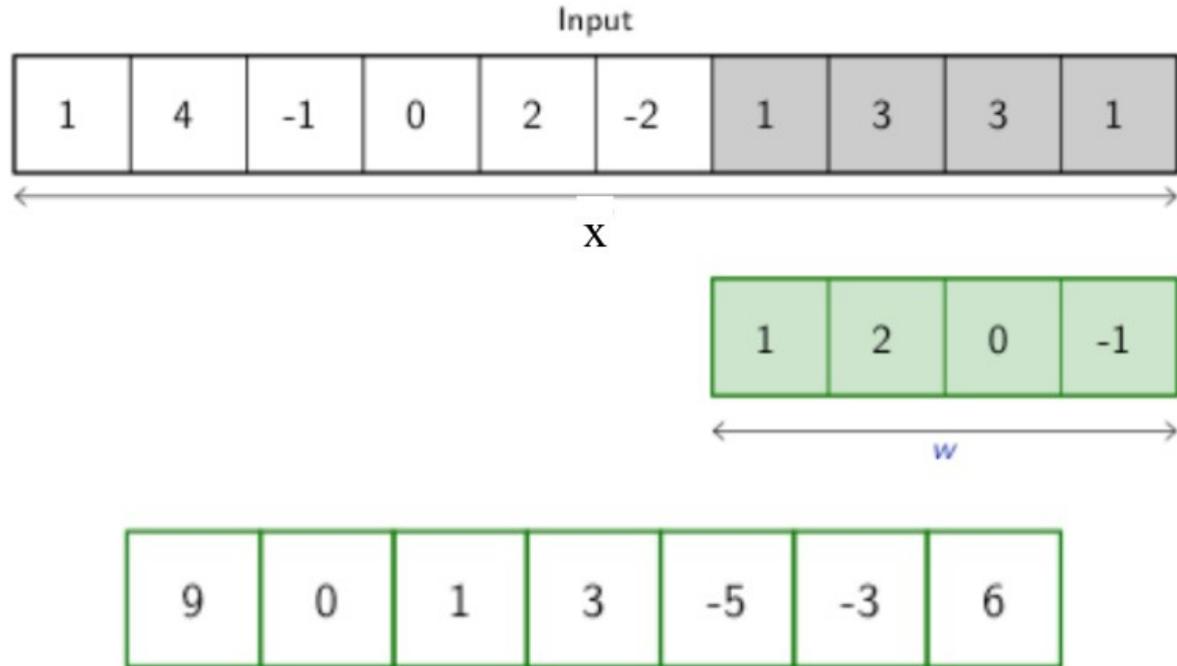
# Convolution 1D



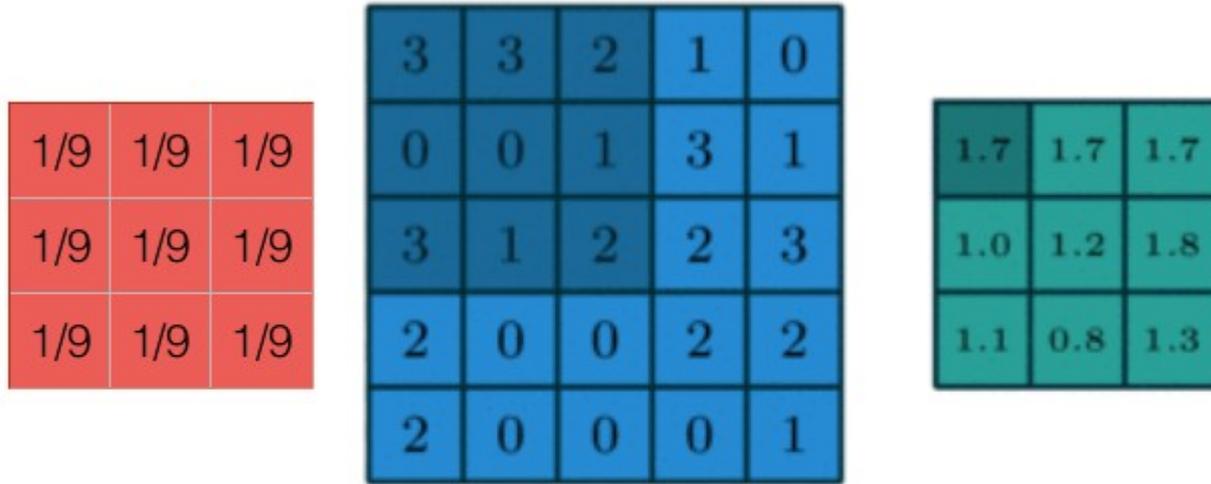
# Convolution 1D



# Convolution 1D



# Convolution 2D

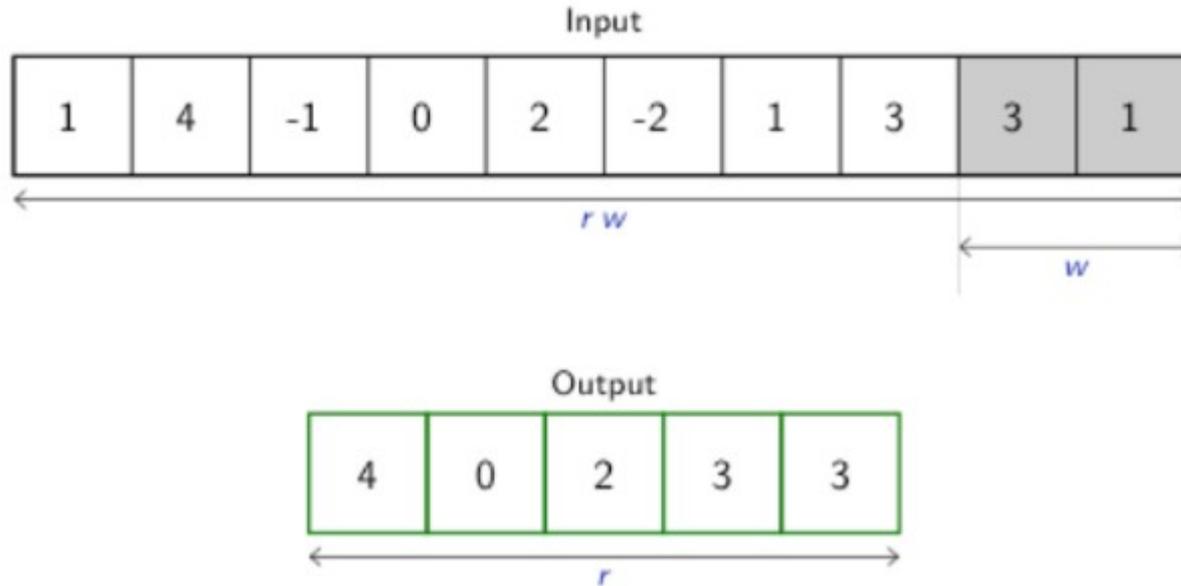


**KERNEL**

**INPUT (IMAGE)**

**OUTPUT**

# Max Pooling



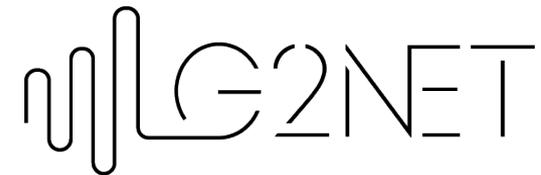
# Demo

<http://scs.ryerson.ca/~aharley/vis/conv/flat.html>



Let's check notebooks

→ KerasCNN1D and KerasCNN2D



Good luck!

