

image

conv-64

conv-64

maxpool

conv-128

conv-128

maxpool

conv-256

conv-256

maxpool

conv-512

conv-512

maxpool

conv-512

conv-512

maxpool

FC-4096

FC-4096

FC-1000

softmax

1. Train on
ImageNet

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2. If small dataset: fix
all weights (treat CNN
as fixed feature
extractor), retrain only
the classifier

i.e. swap the Softmax
layer at the end

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3. If you have medium sized
dataset, “**finetune**” instead:
use the old weights as
initialization, train the full
network or only some of the
higher layers

retrain bigger portion of the
network, or even all of it.