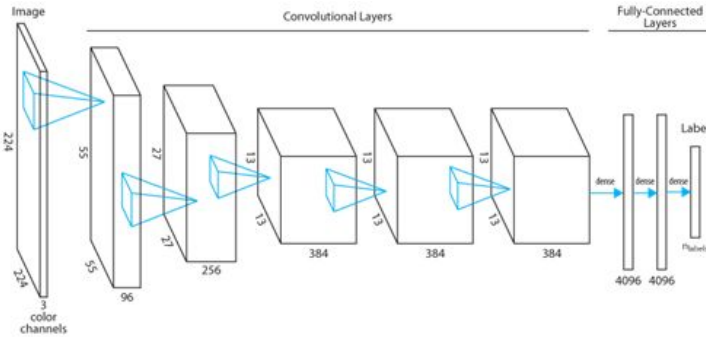


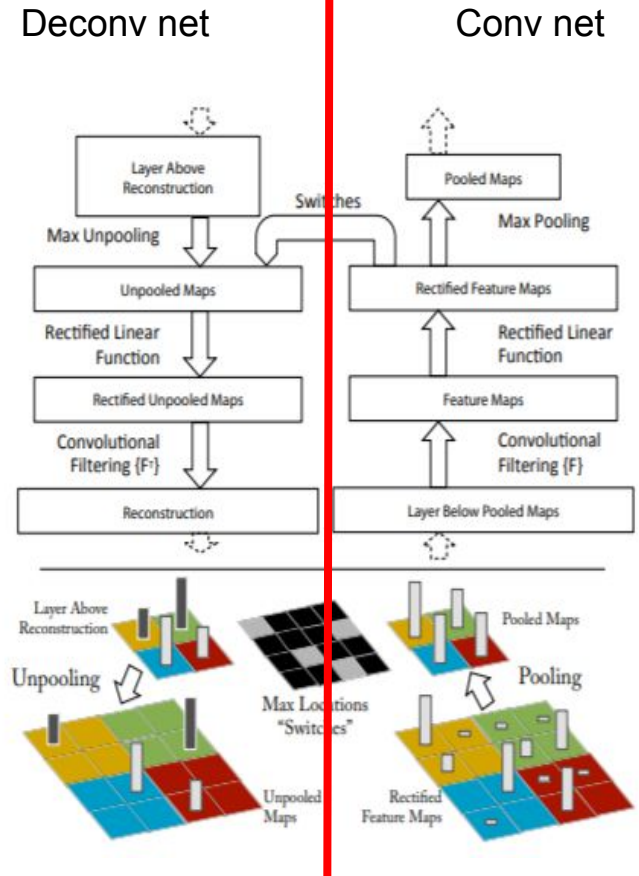
# Visualizing CNNs



**Model:** Attach deconv net on each layer

To visualize a CNN filter on a layer

- Pick top 9 activations for the filter
- For each pick:
  - Set all other activations on the layer to zero
  - Project back to input space using deconv net
  - Identify the area of interest in the input space
    - Gray-ish images
  - Identify the corresponding patch in training data
    - RGB images



Ref:

- <https://arxiv.org/abs/1311.2901>
- <https://blogs.technet.microsoft.com/machinelearning/2017/04/12/embarrassingly-parallel-image-classification-using-cognitive-toolkit-tensorflow-on-azure-hdinsight-spark/>