Understanding the operation of a convnet requires interpreting the feature activity in intermediate layers. We present a novel way to *map these activities back to the input pixel space*, showing what input pattern originally caused a given activation in the feature maps. We perform this mapping with a Deconvolutional Network (deconvnet) (Zeiler et al., 2011). A deconvnet can be thought of as a convnet model that uses the same components (filtering, pooling) but in reverse, so instead of mapping pixels to features does the opposite. In (Zeiler et al., 2011), deconvnets were proposed