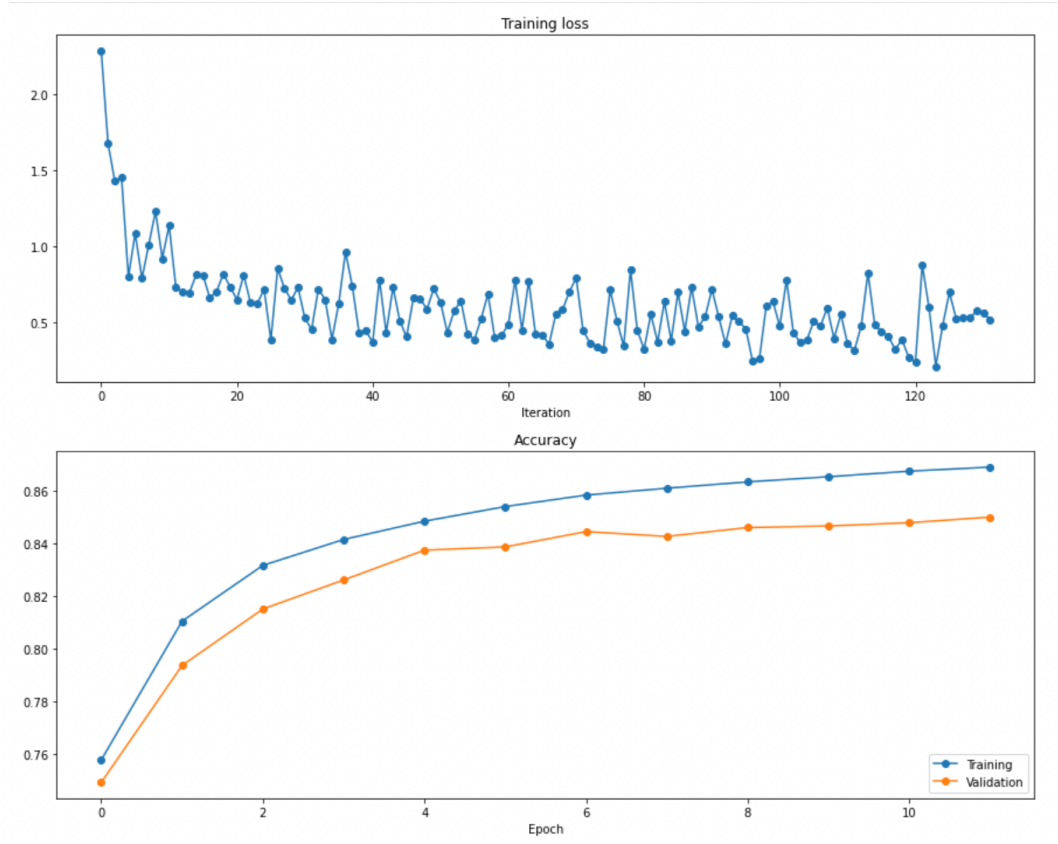
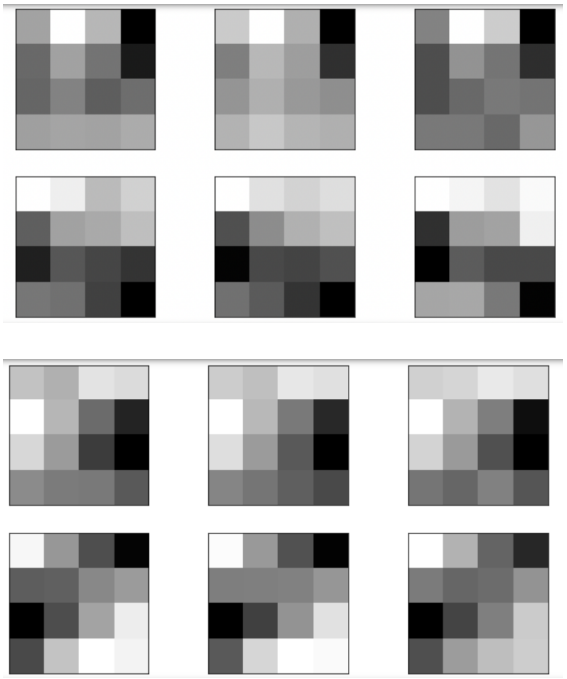
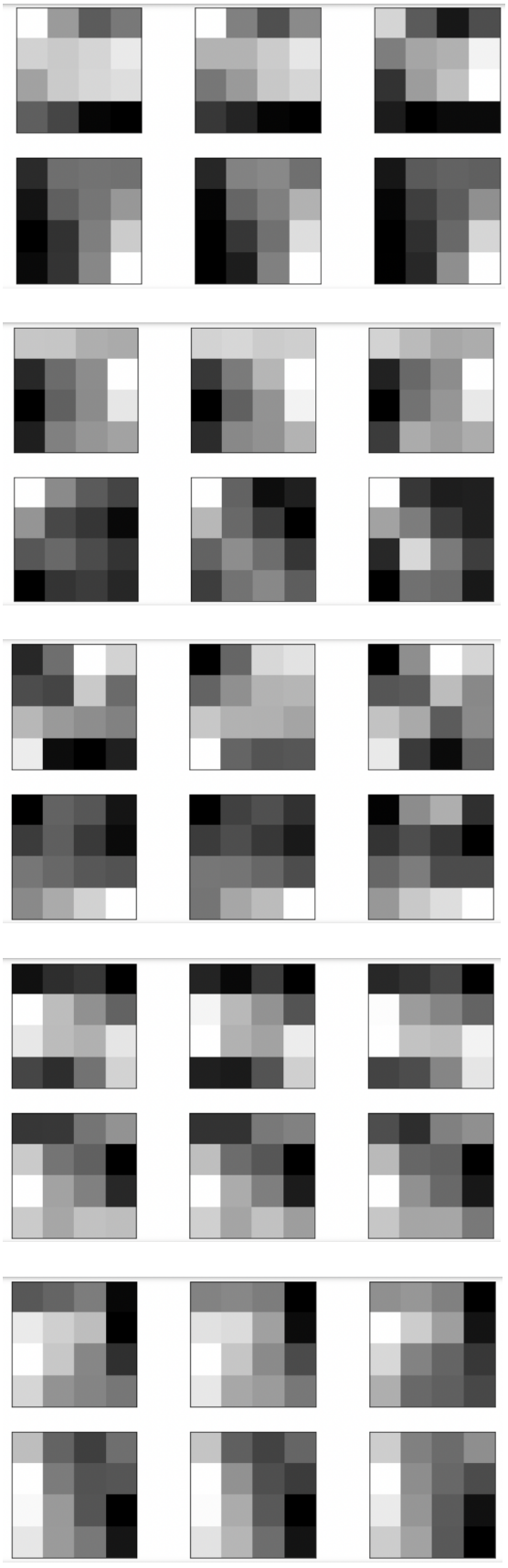
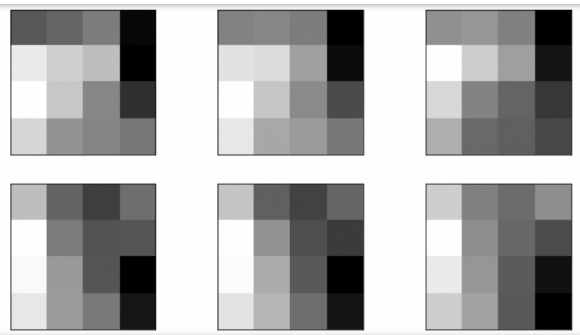
1. Training loss / accuracy curves for CNN training



2. Visualization of convolutional filters







3. Answers to inline questions about convolutional filters

- 3 columns correspond to color channels.
- The convolutional filters are shown for 3 color channels. There are 16 output channels(kernel size =4).
- From my perspective, the filters are learning distinct patterns in the input image. Since it is the first layer, the filters directly correspond to spatial patterns in input image. Since numbers have different location of lines and edges spatially, we notice that each filter has higher weights for certain regions(white zones). These directly capture certain lines, edges and short patterns in the input image.
- Also, we notice that each color channel filter captures similar patterns in the input image for the 3 different input channels.
- These are the high level feature from the image. Typically they will try to capture certain simple features(patterns) in the input image.