Class : Lorry / Truck

Image 1:

Image 2:

Image 3:

Image 4:

Image 5:

Image 6:

Image 7:

Image 8:

Image 9:

Image 10:

The Convolutional Neural Network consists of -

- 5 Convolutional Layers + Pooling Layers
- A Dense Network
- 3 x 3 Filters
- Input Images re-sized to 224 x 224
- The output is plotted using the ‘Greens’ colour combination of the CMAP function. A green hue provides a better output visibility than a Grey hue.

Let us Validate the Feature Map after each convolutional layer :

Convolutional Layer -1

Image ID	Output
image1	

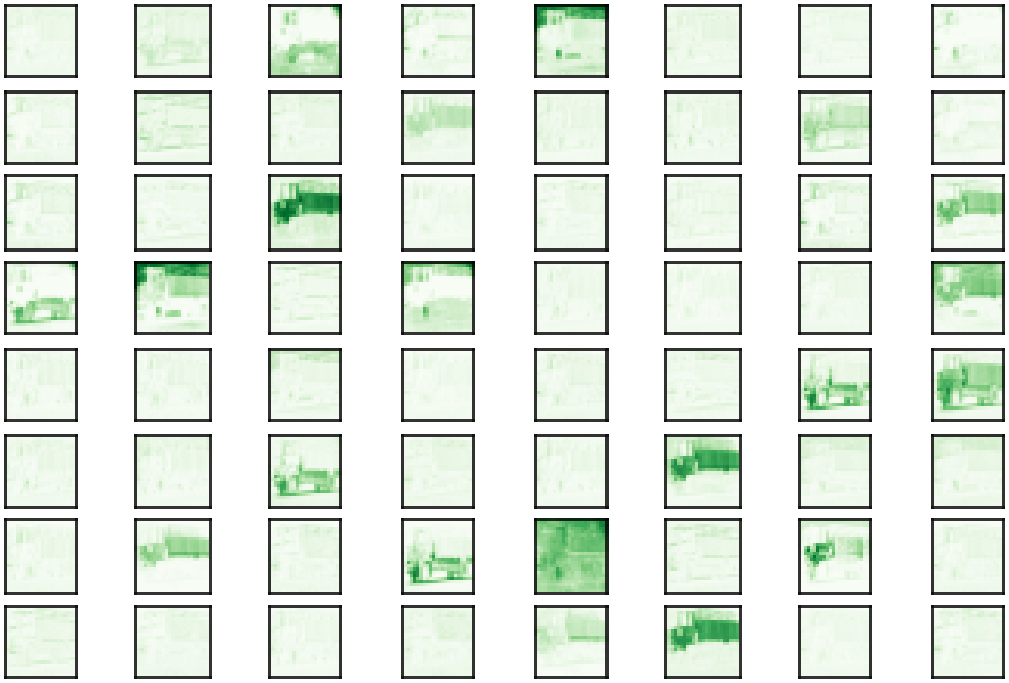
image2	
image3	

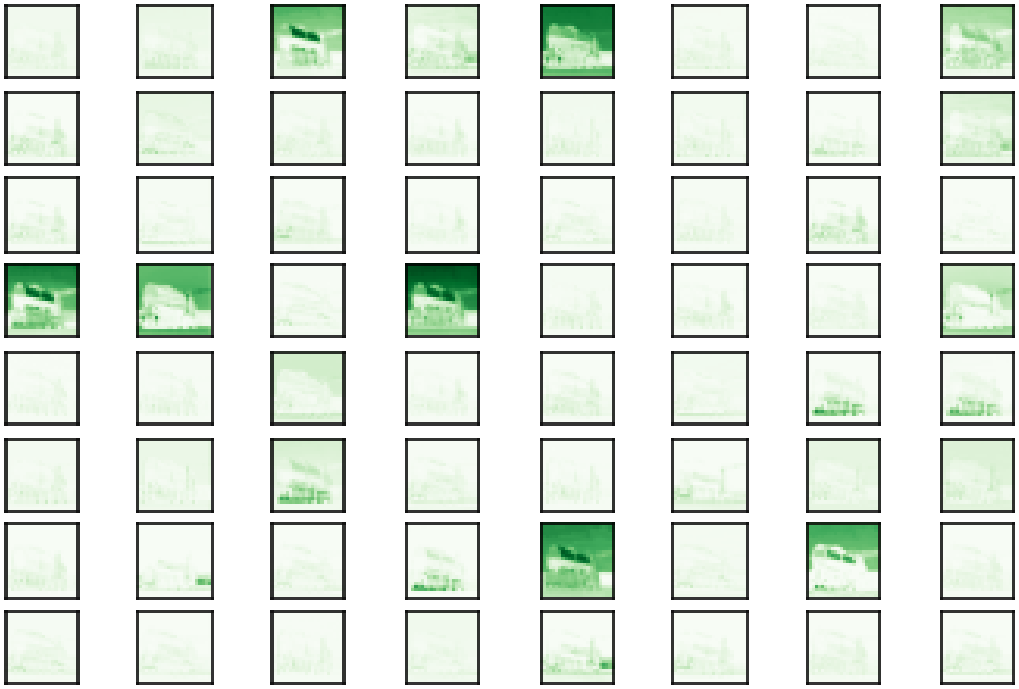
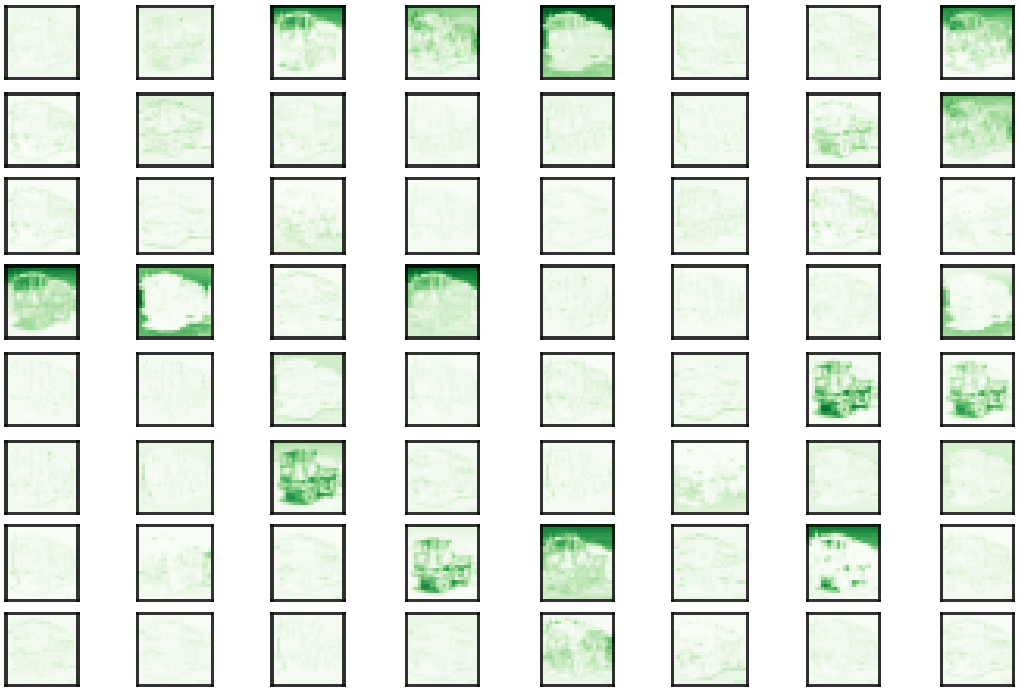
image4	
image5	

image6	
image7	

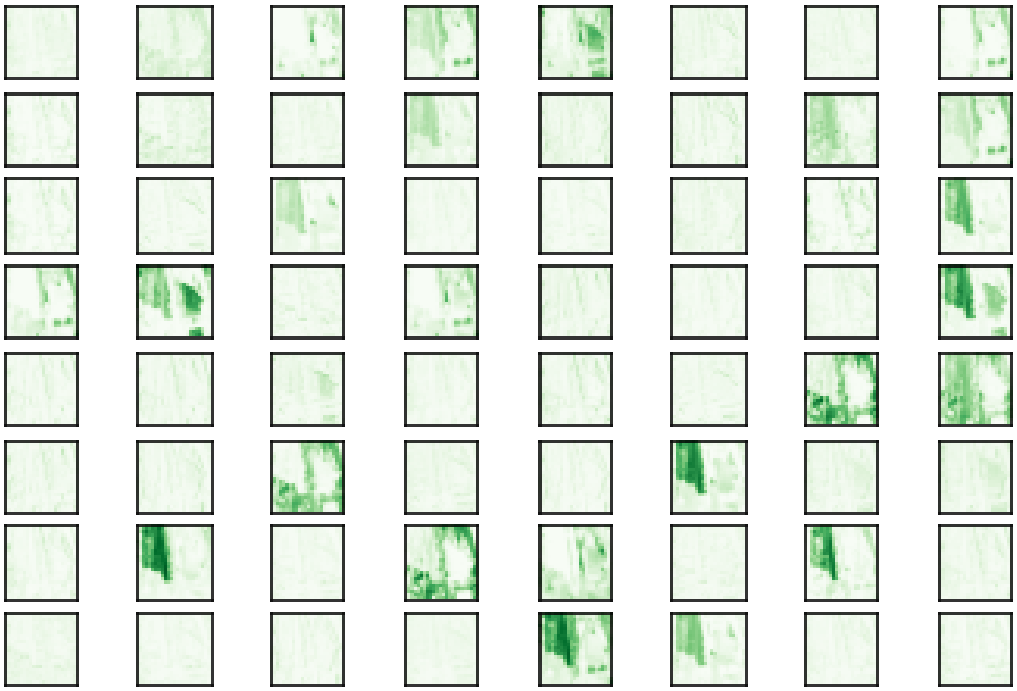
image8	
image9	

image10	

Convolutional Layer -2

Image ID	Output
image1	
image2	

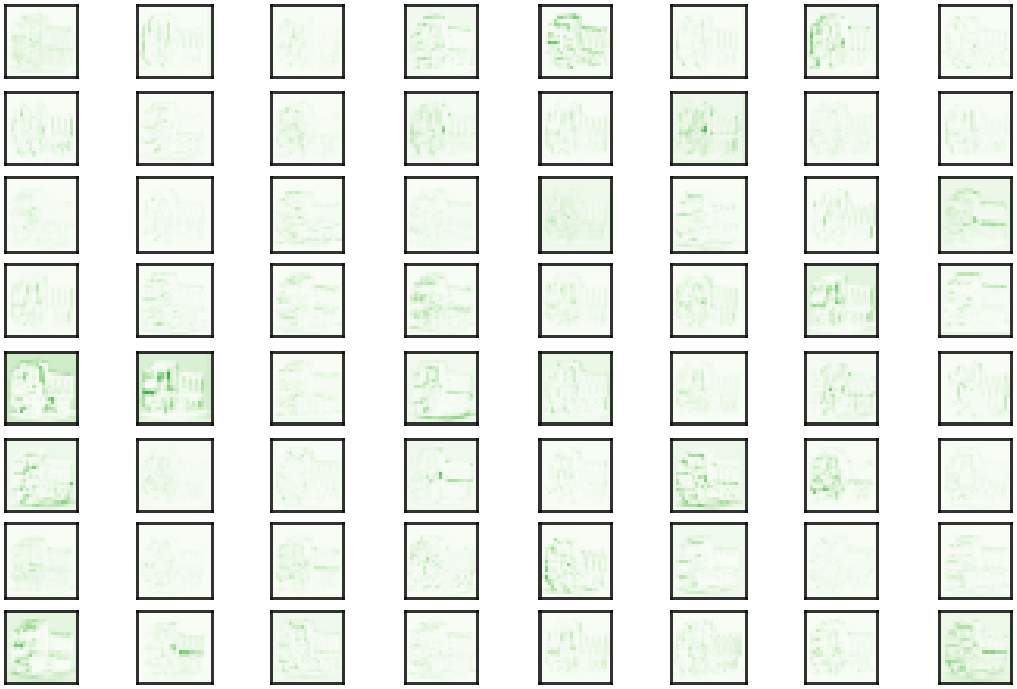
image3	
image4	

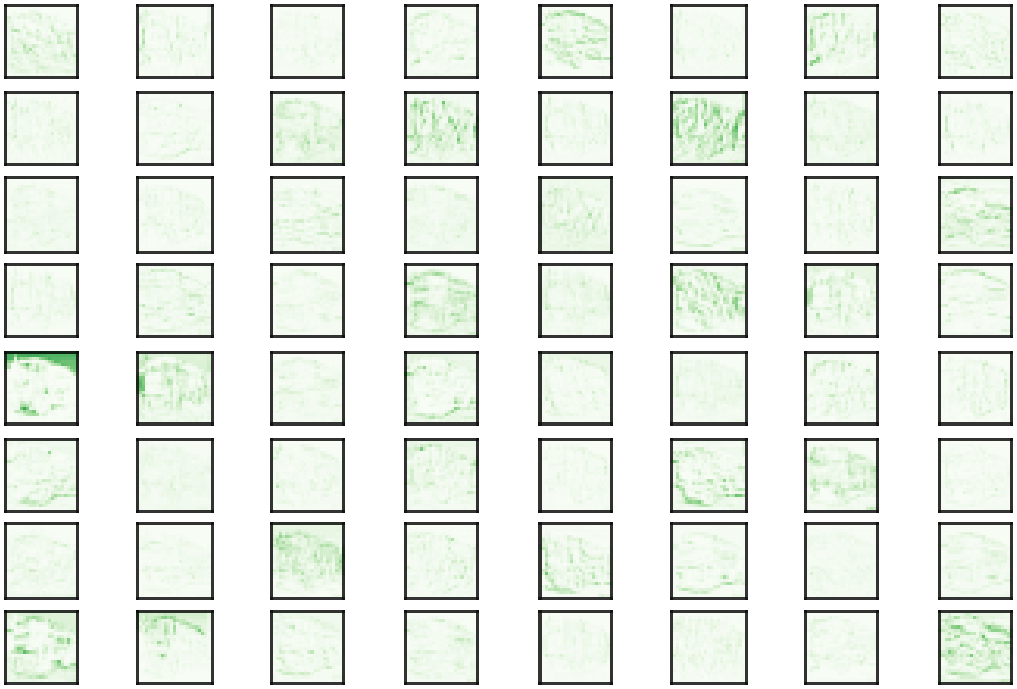
image5	
image6	

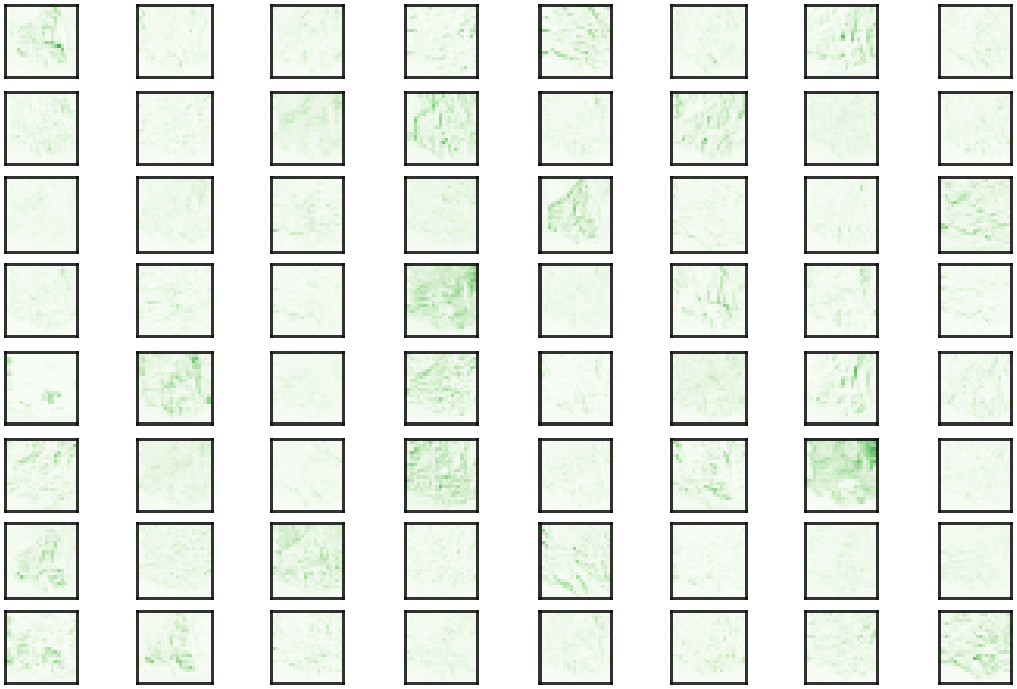
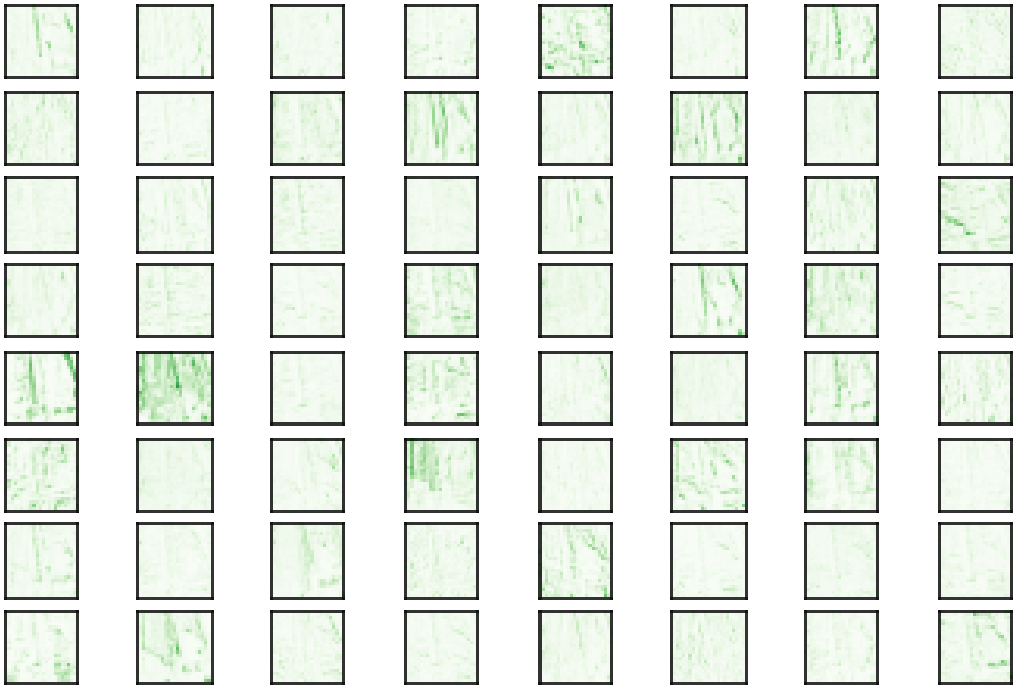
image7	
image8	

image9	
image10	

Convolutional Layer - 3

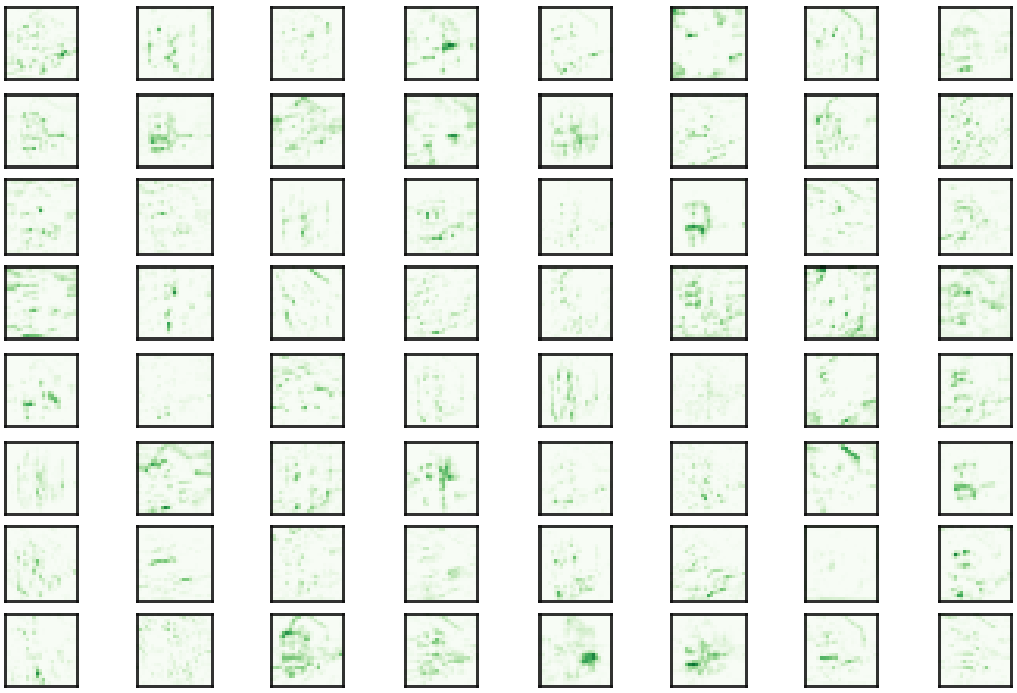
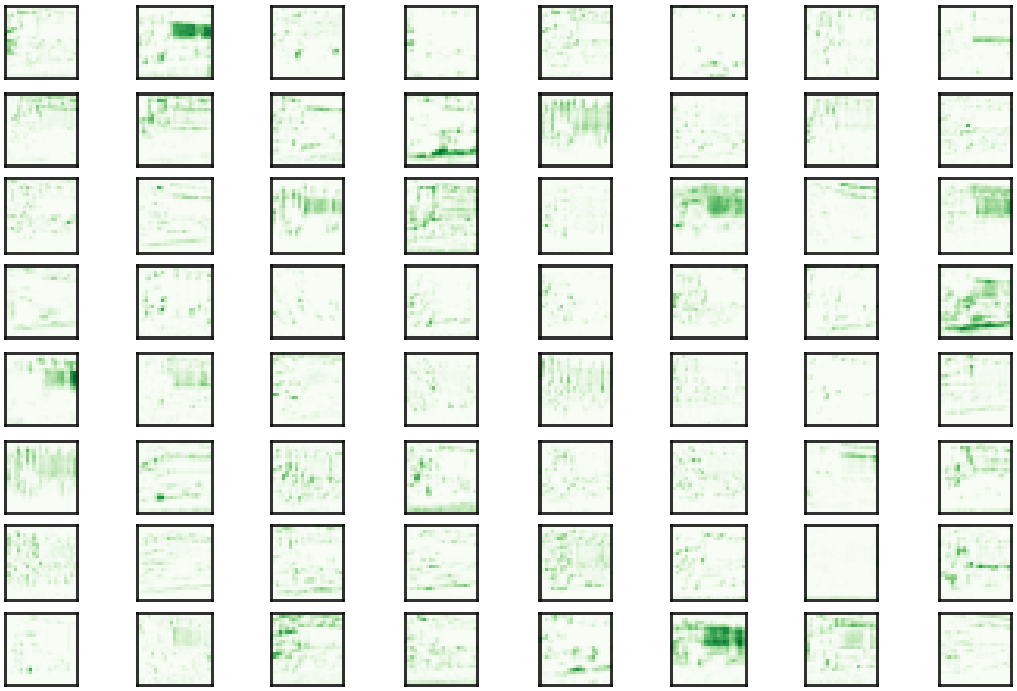
Image ID	Output
image1	
image2	

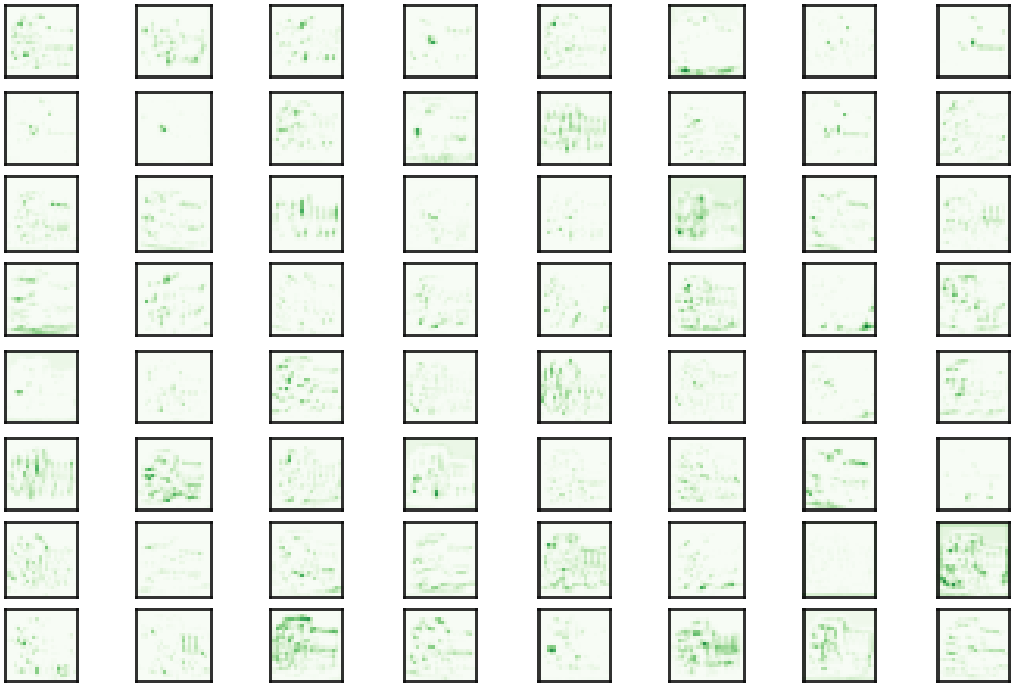
image3	
image4	

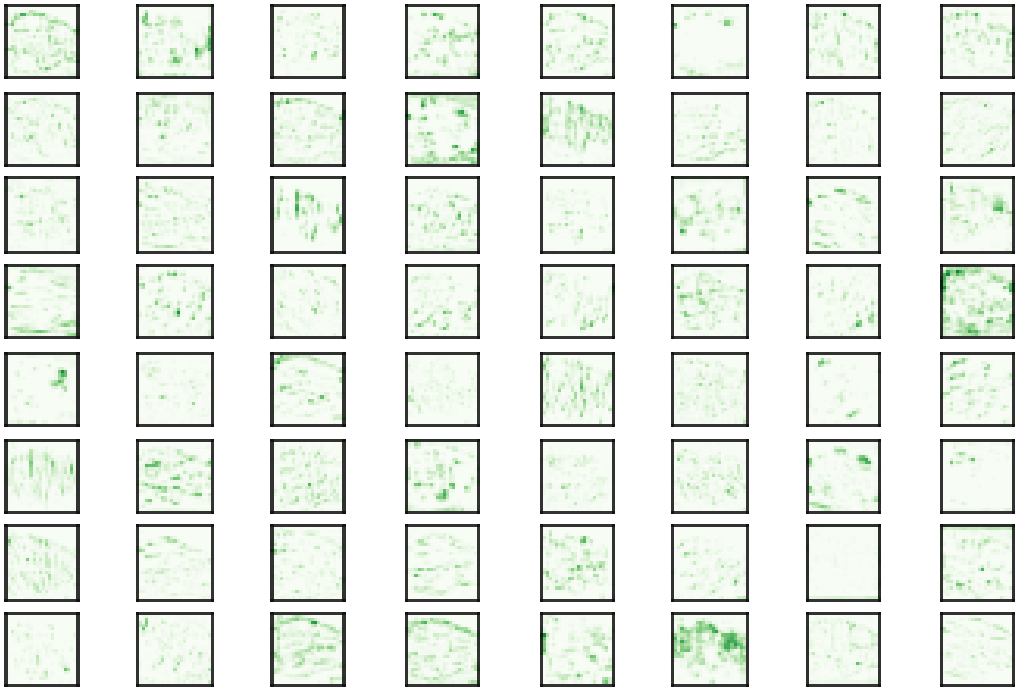
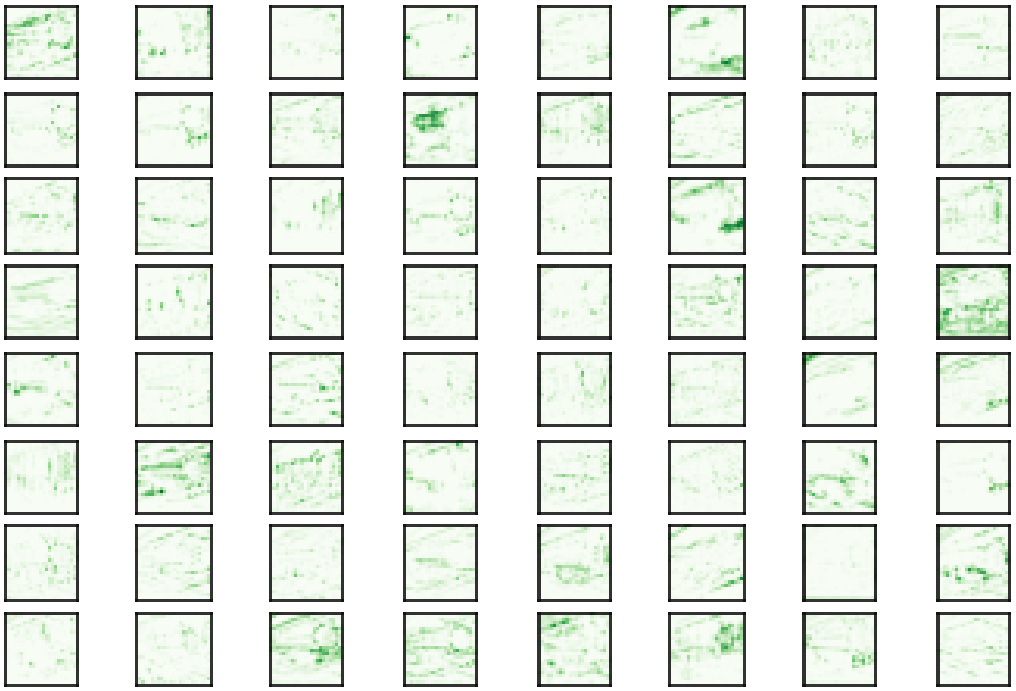
image5	
image6	

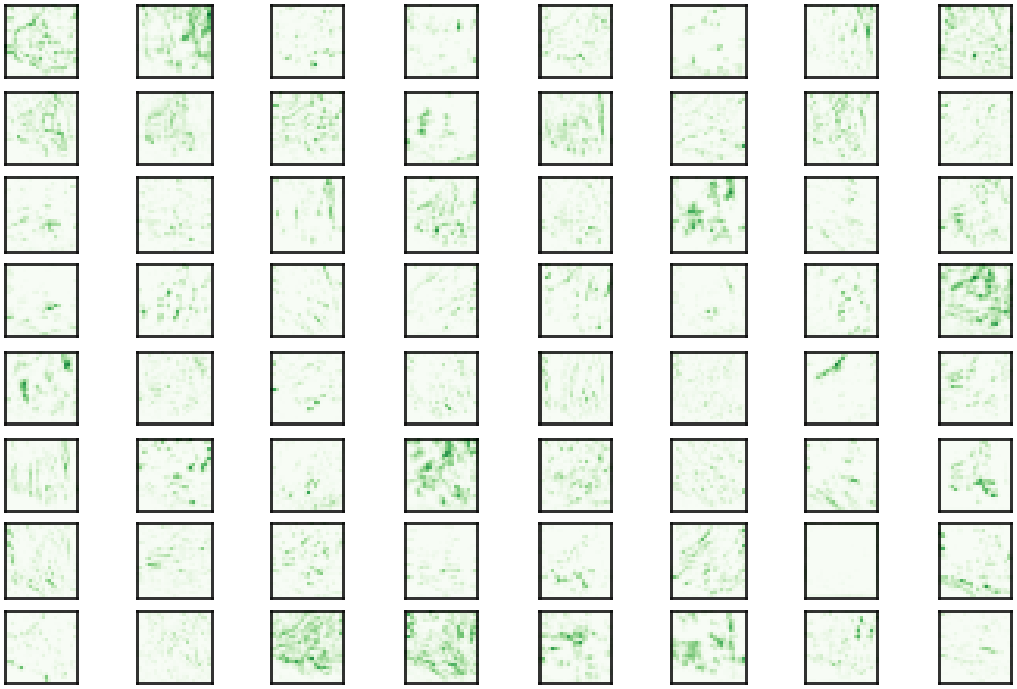
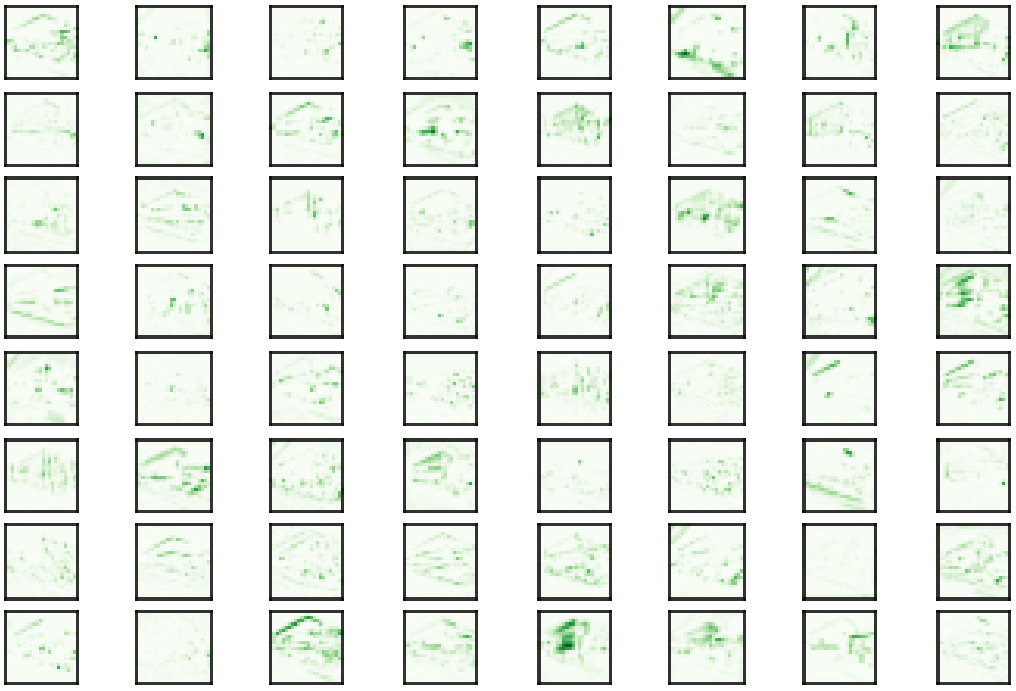
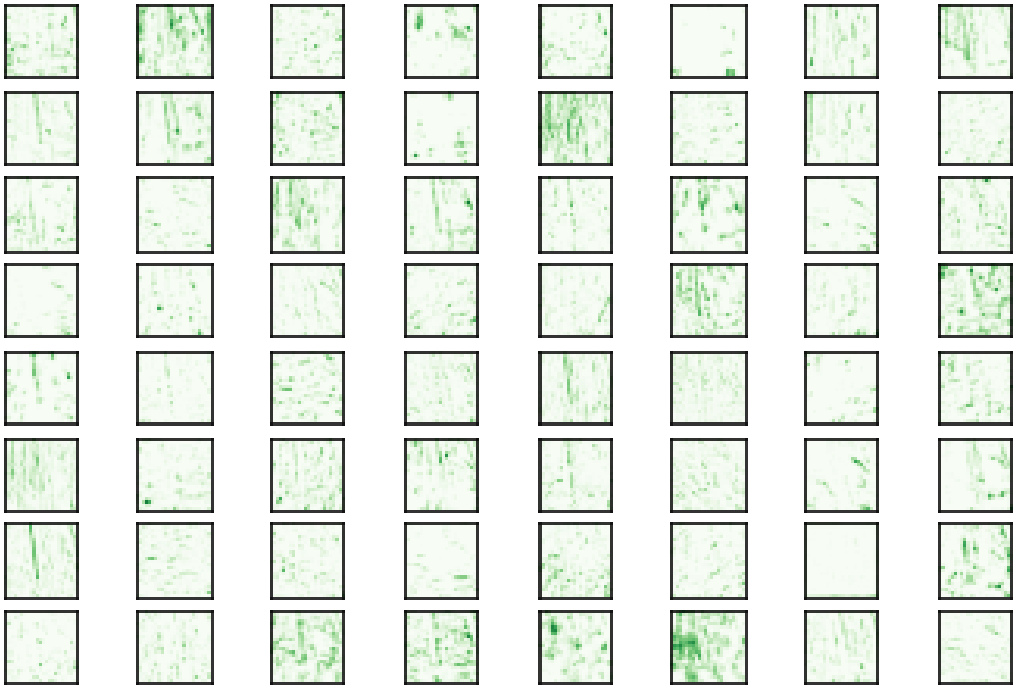
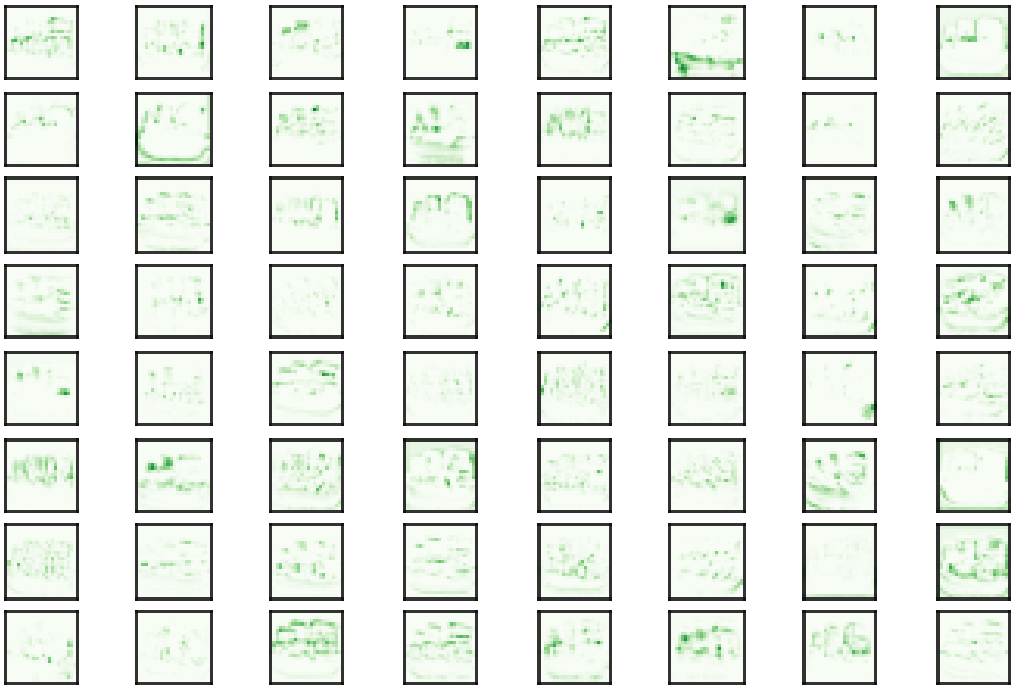
image7	
image8	

image9	
image10	

Convolutional Layer - 4

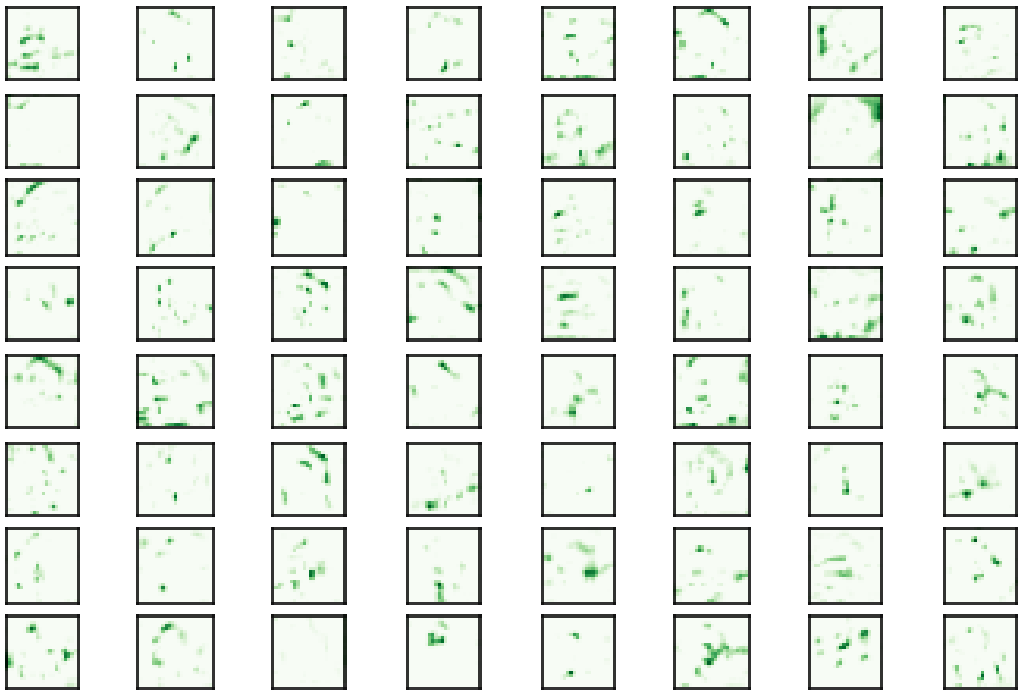
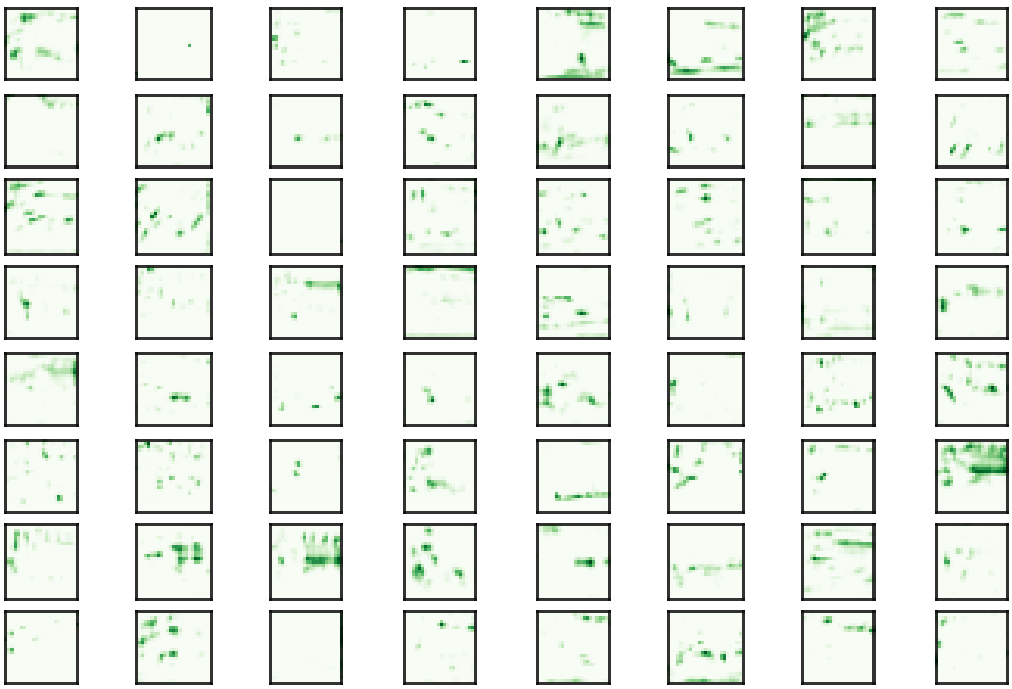
Image ID	Output
image1	
image2	

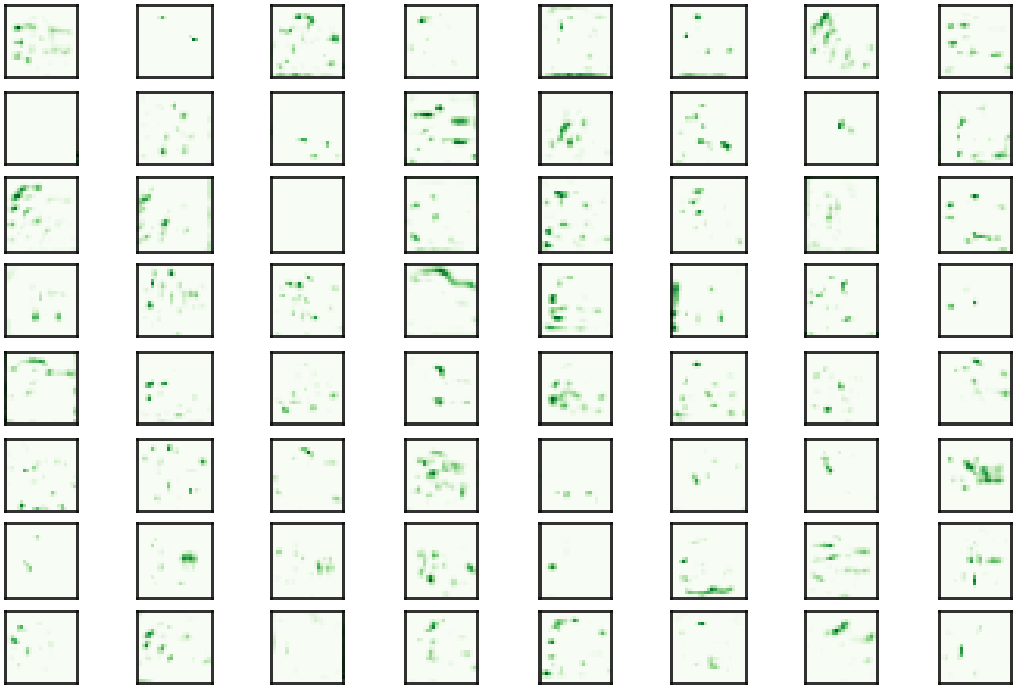
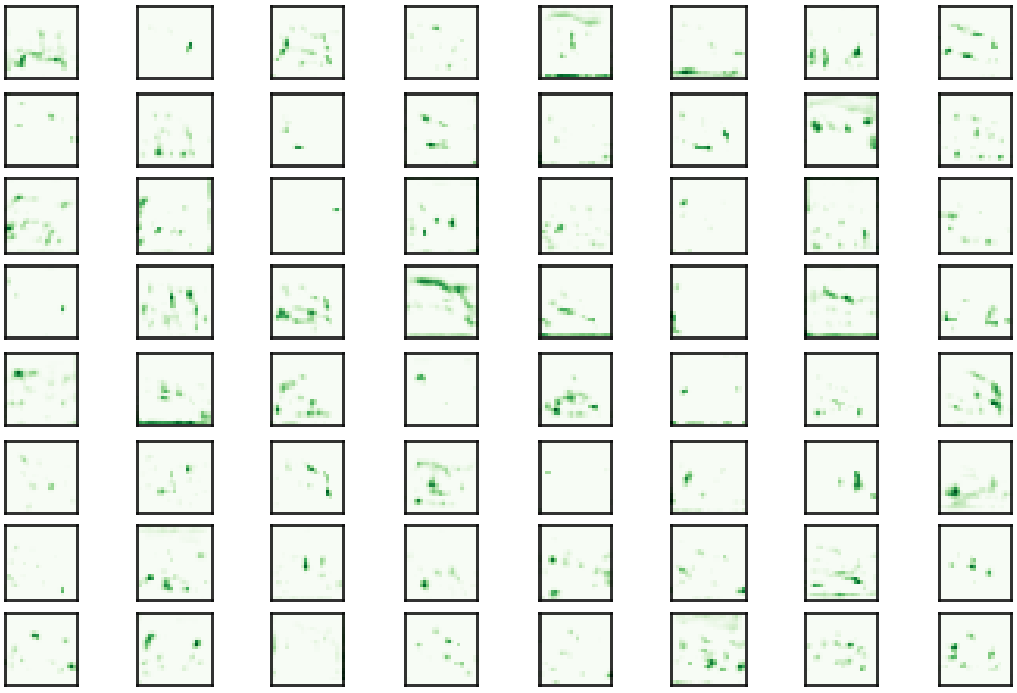
image3	
image4	

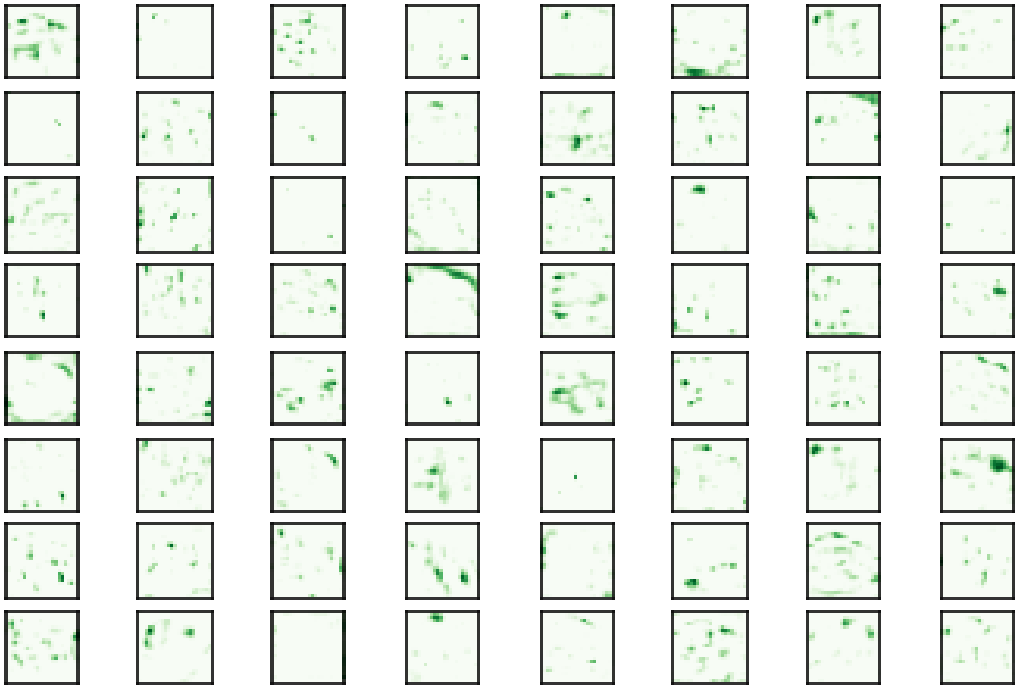
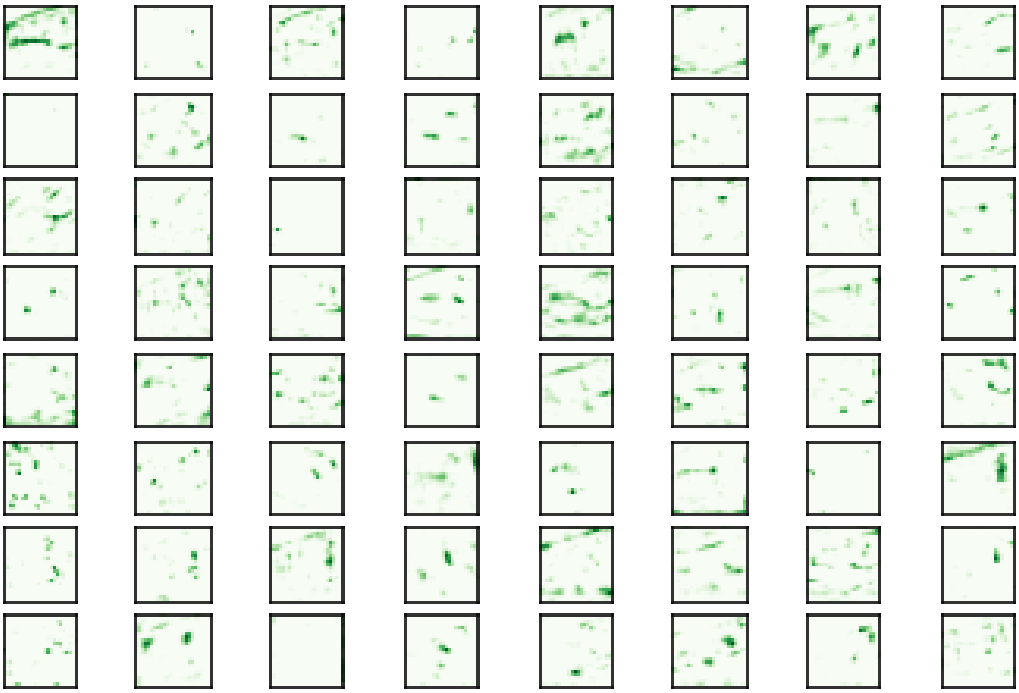
image5	
image6	

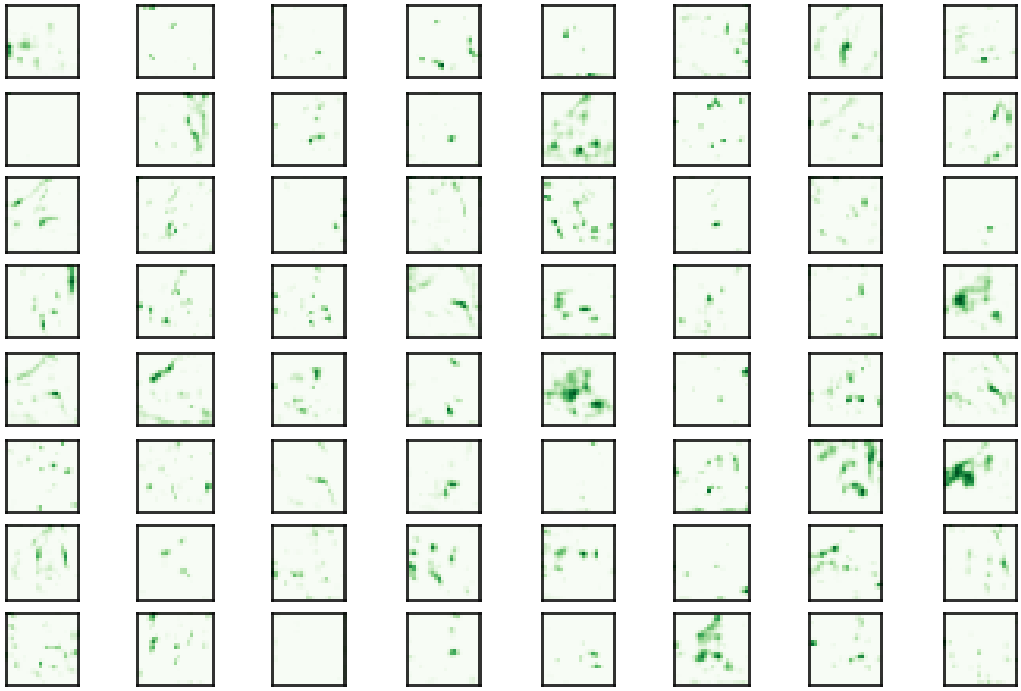
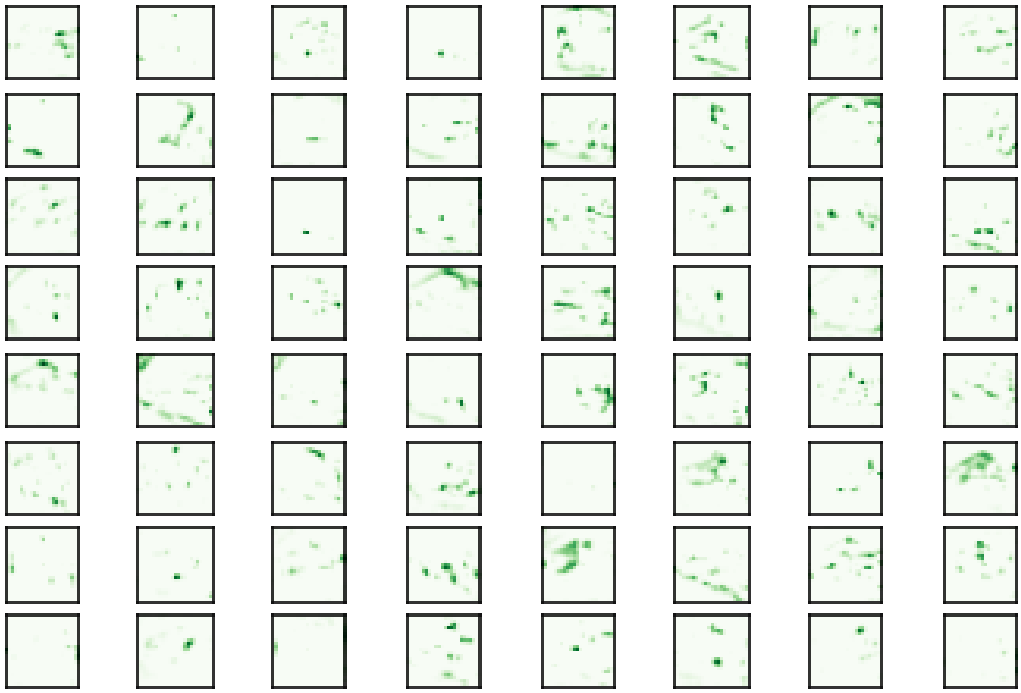
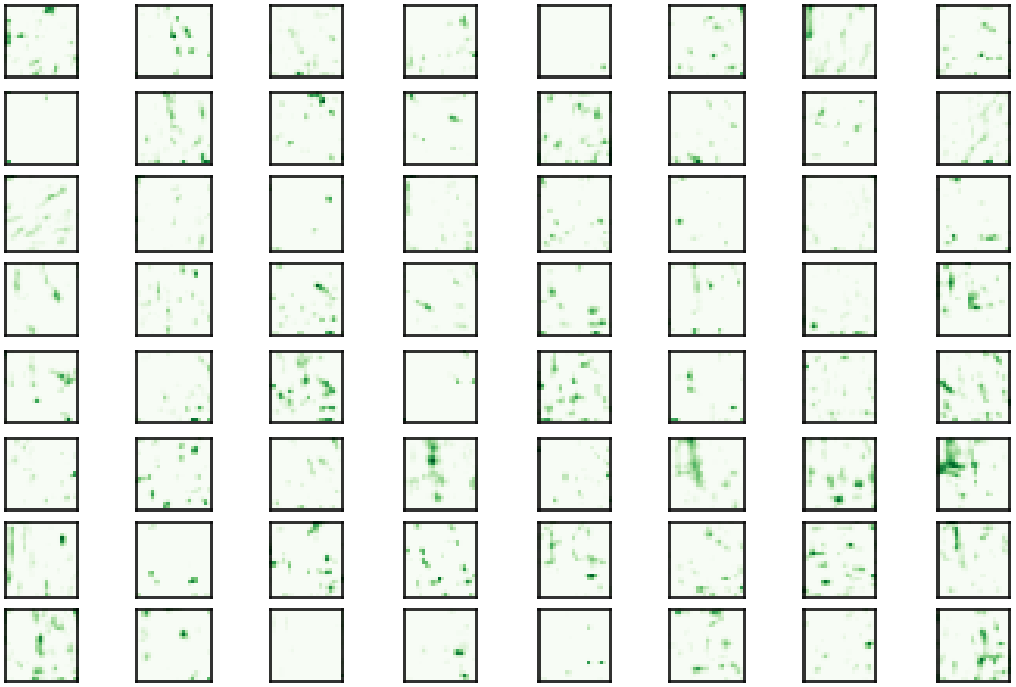
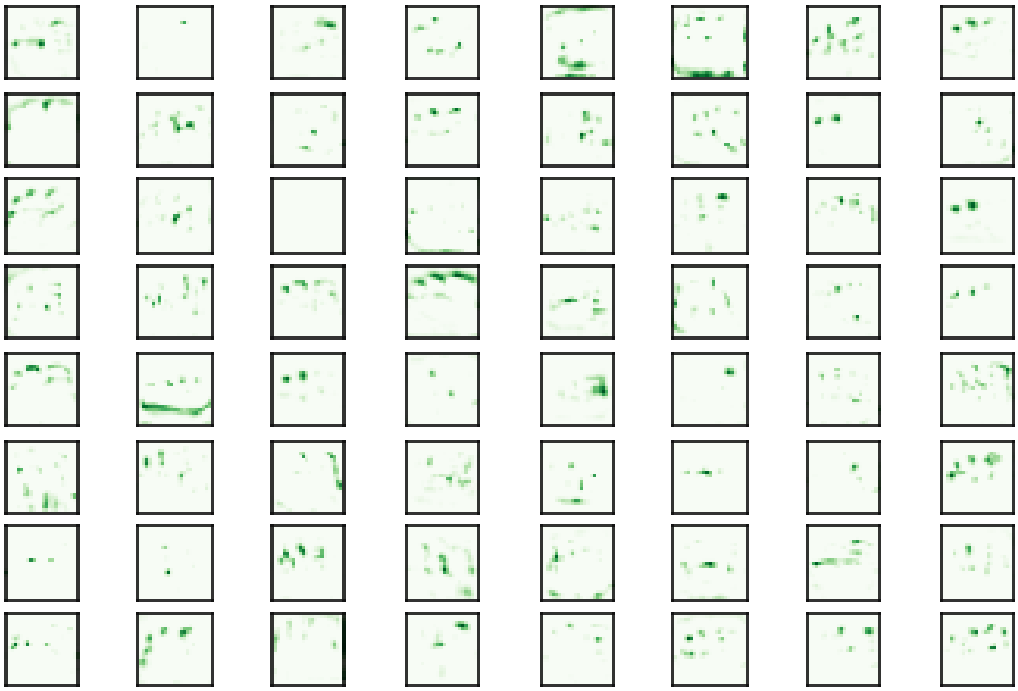
image7	
image8	

image9	
image10	

Convolutional Layer - 5

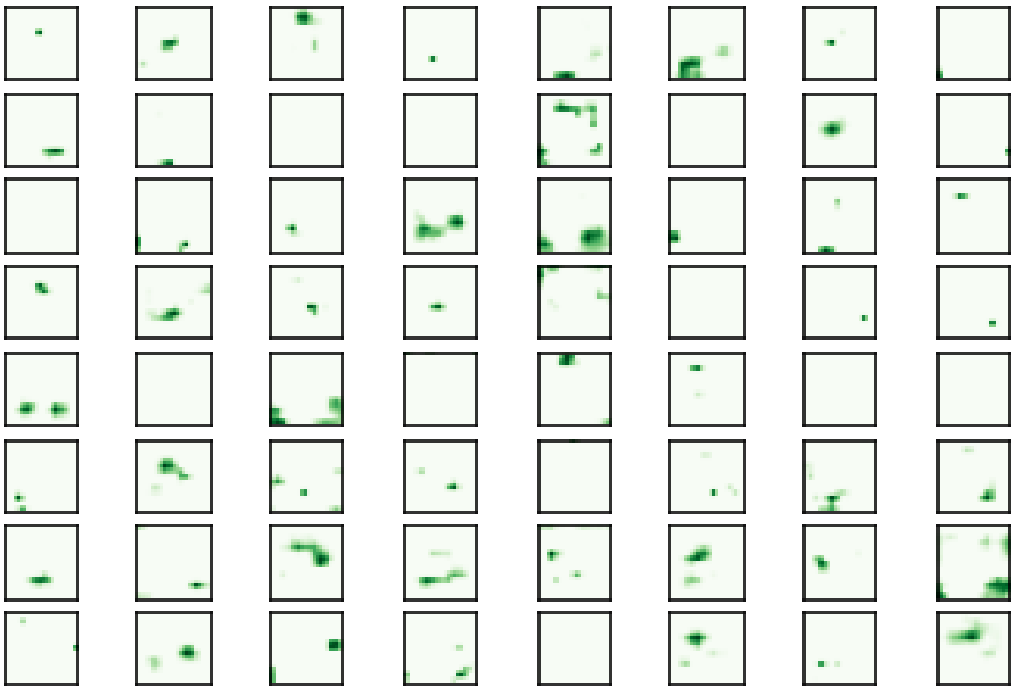
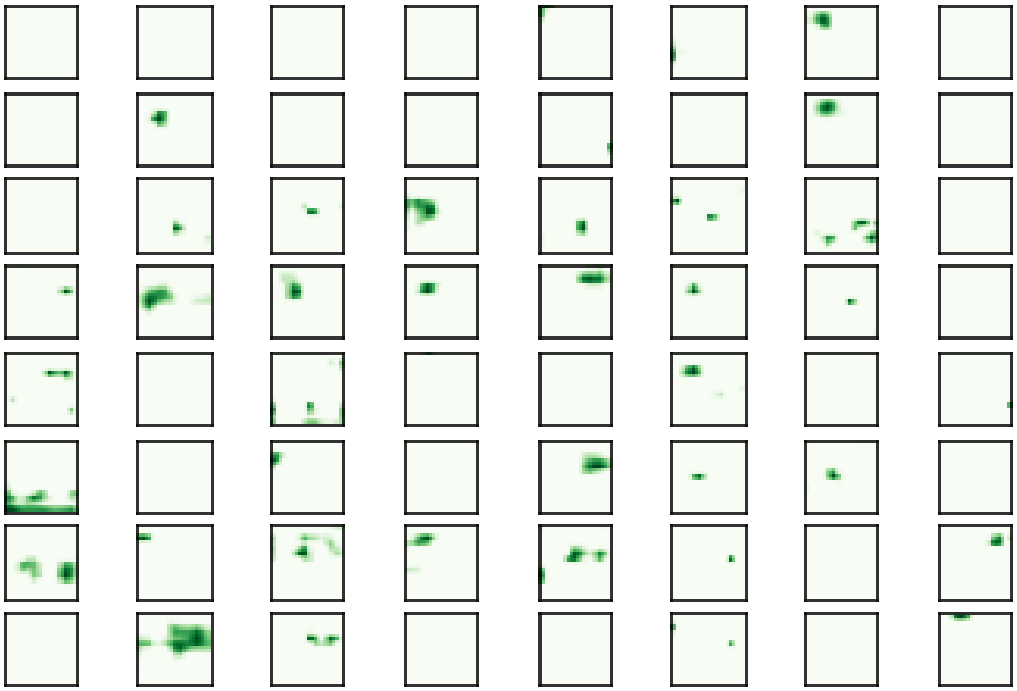
Image ID	Output
image1	
image2	

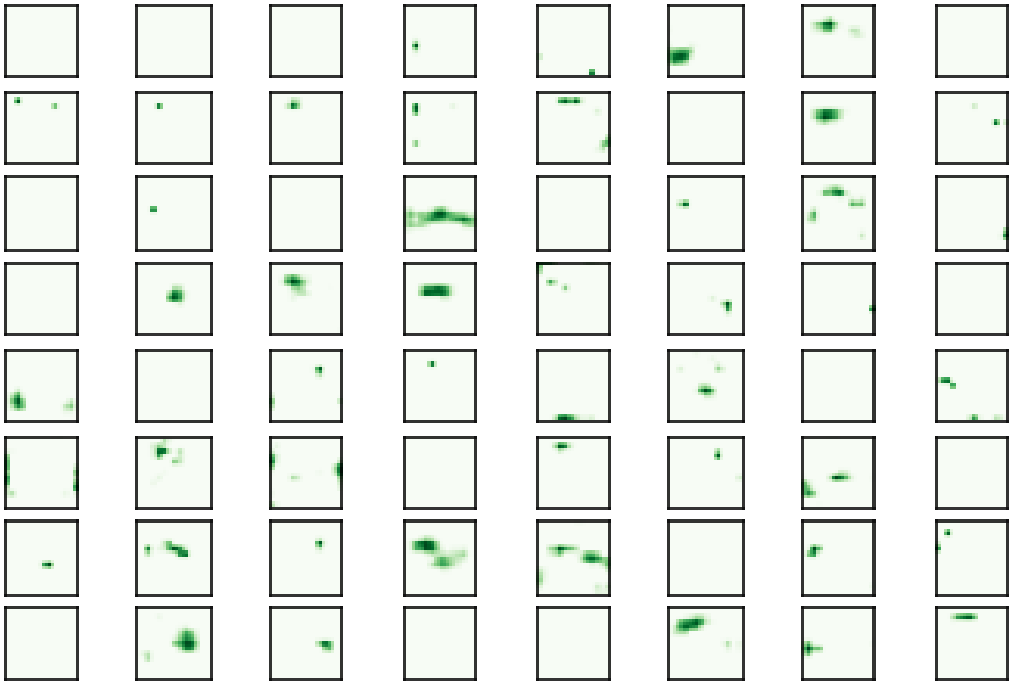
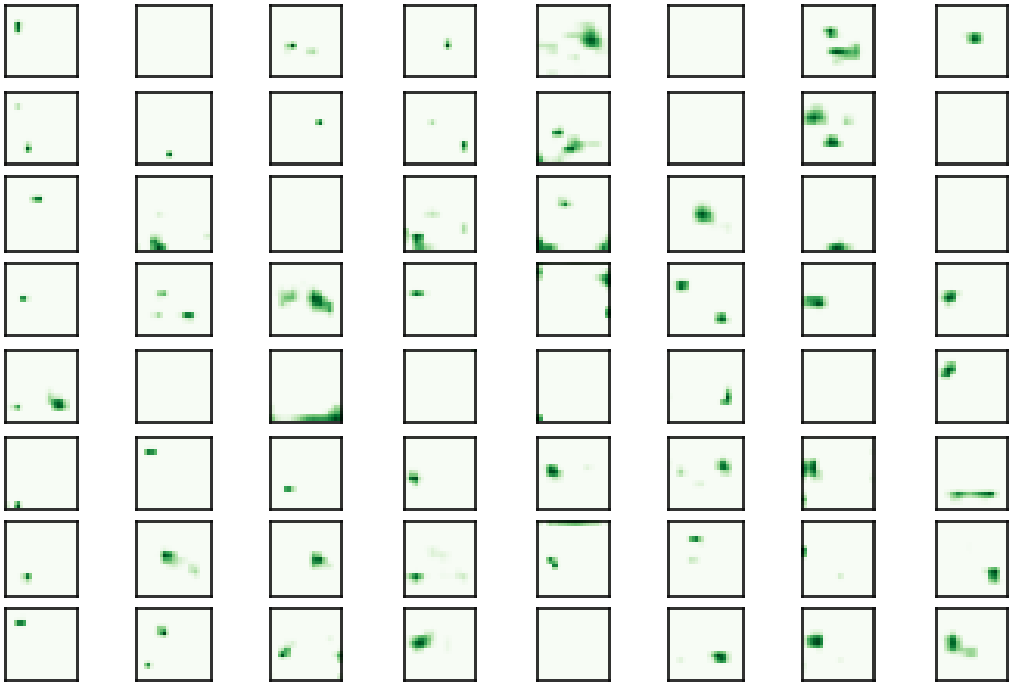
image3	
image4	

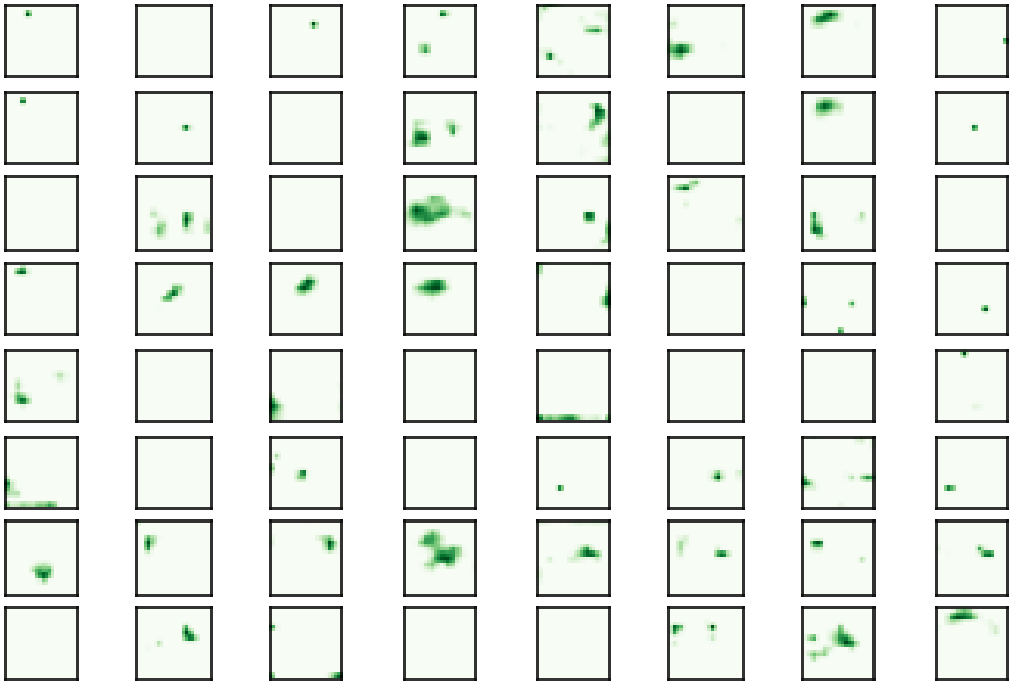
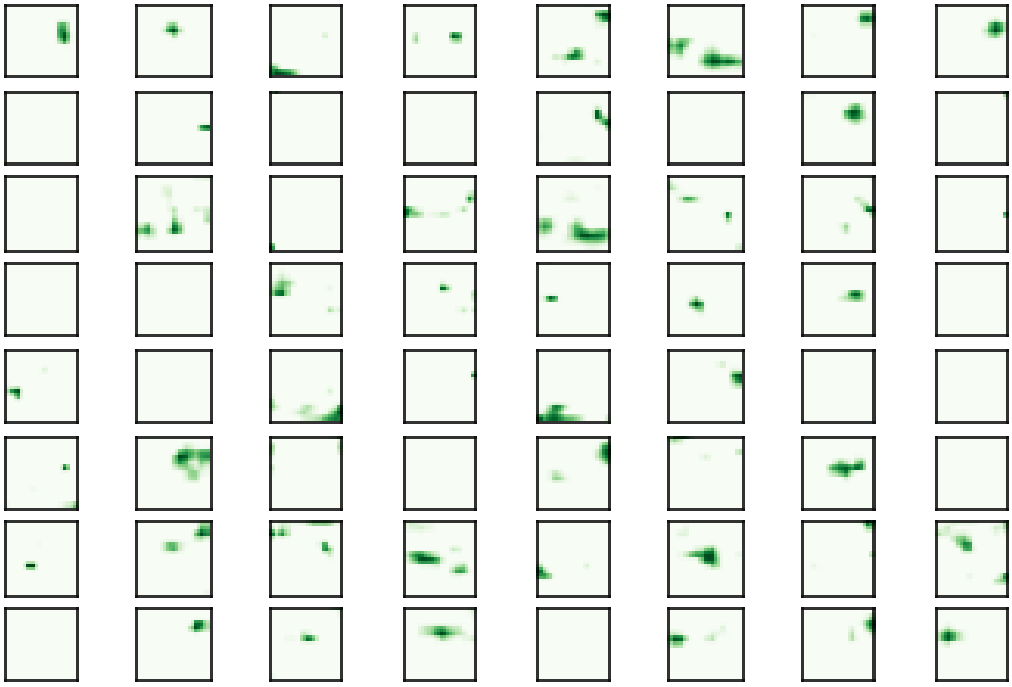
image5	
image6	

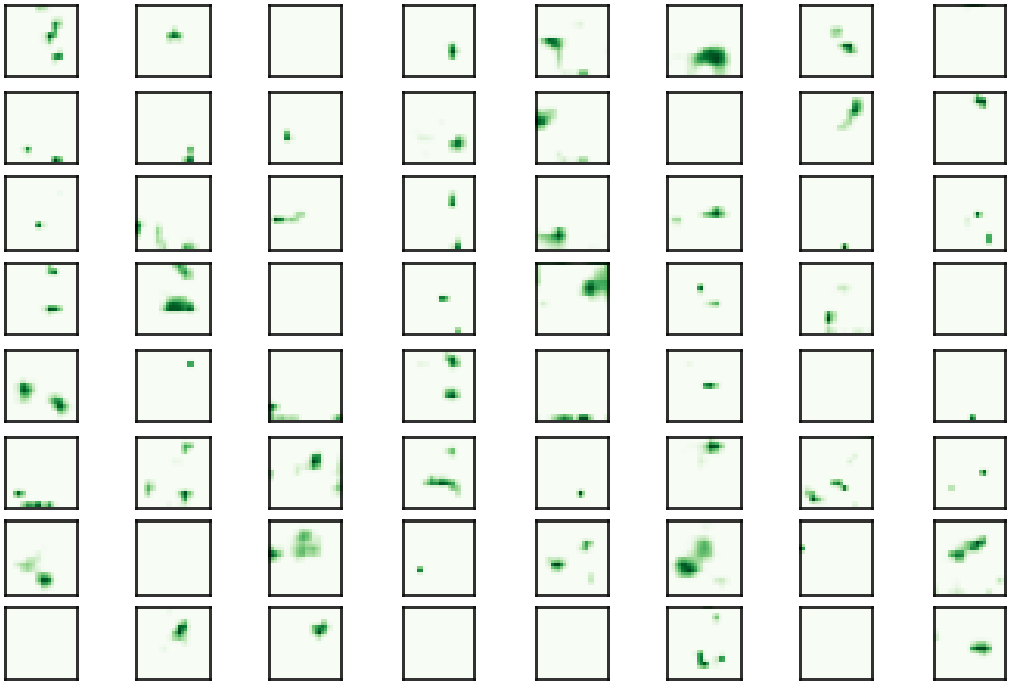
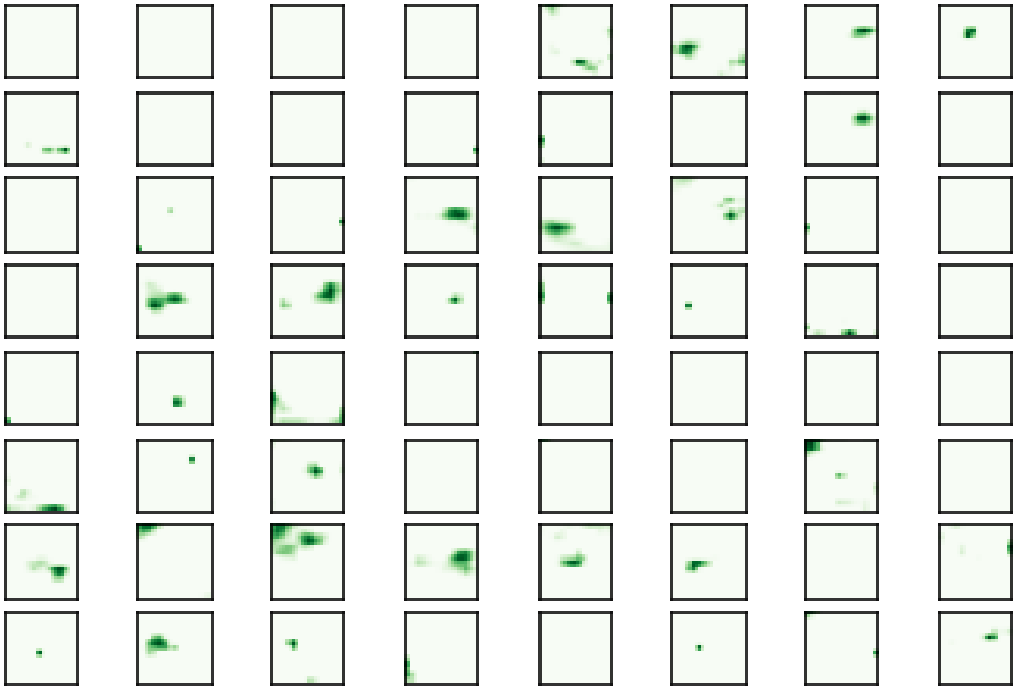
image7	
image8	

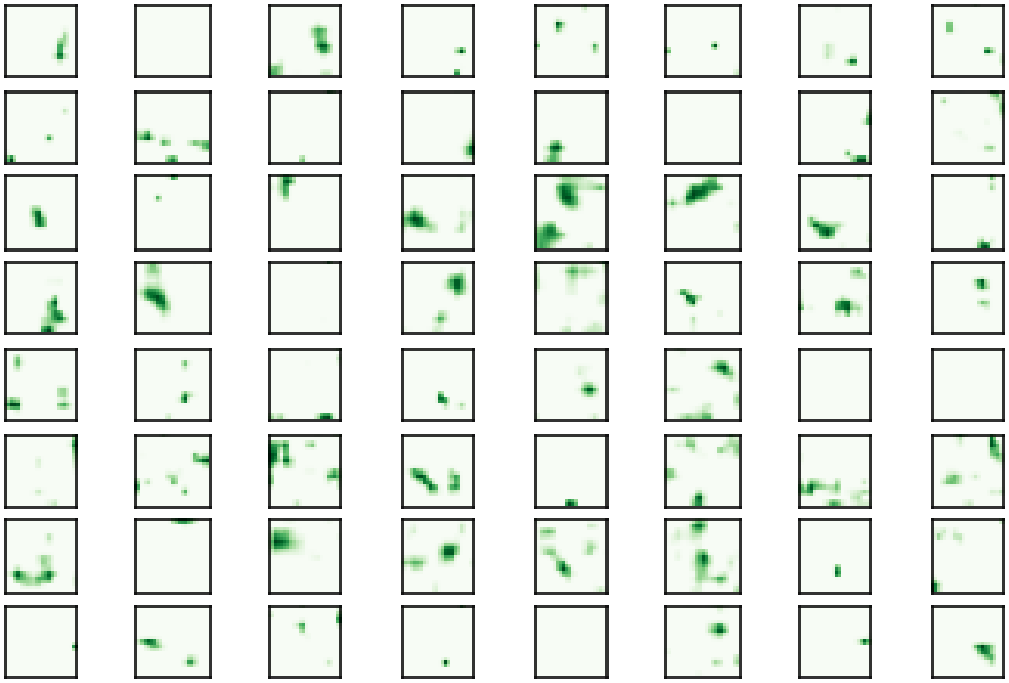
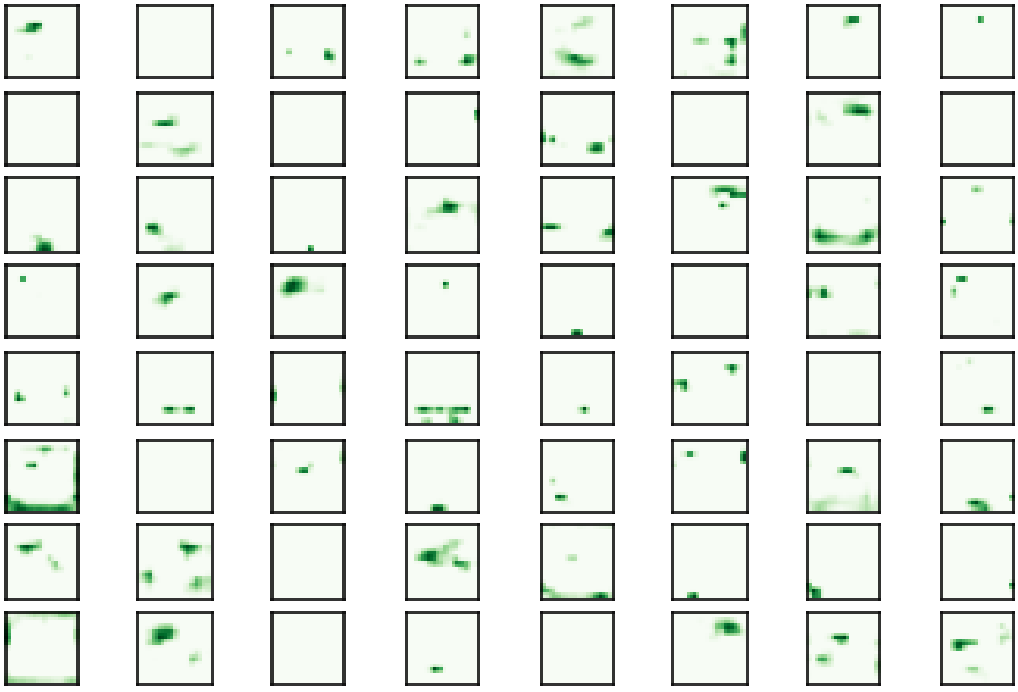
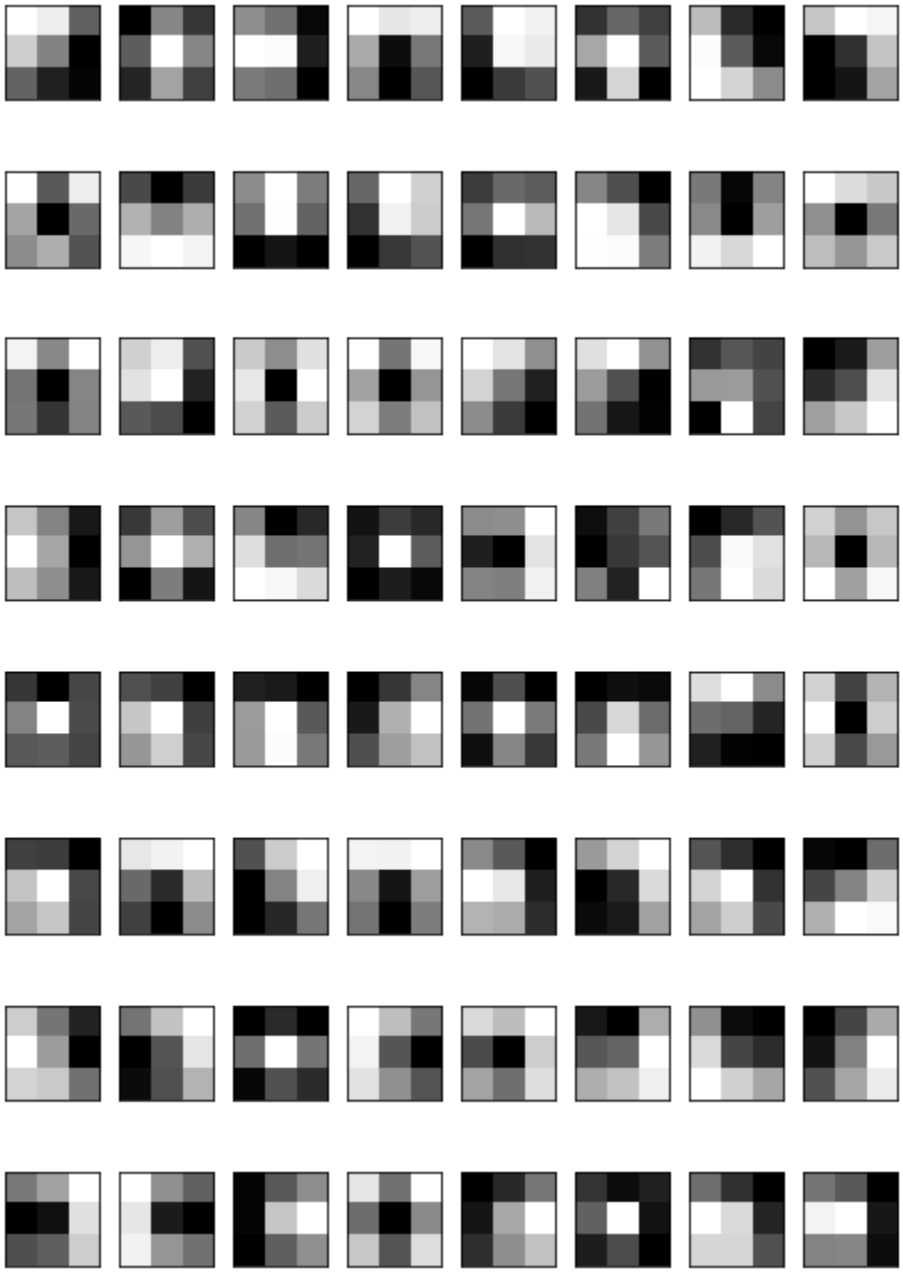
image9	
image10	

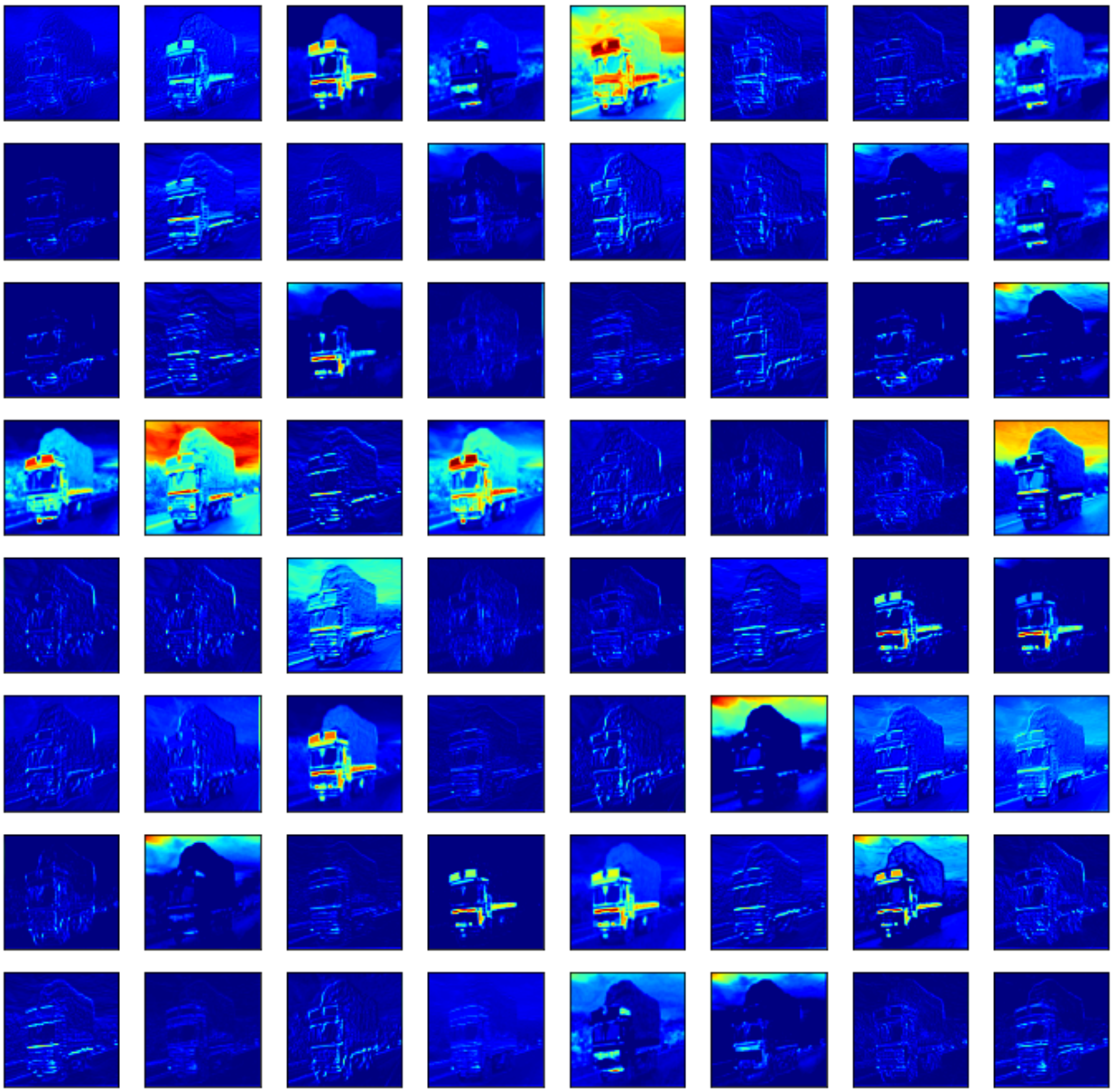
Image - 1

RGB Filter

Black / White Filter



Level - 1 Feature Map



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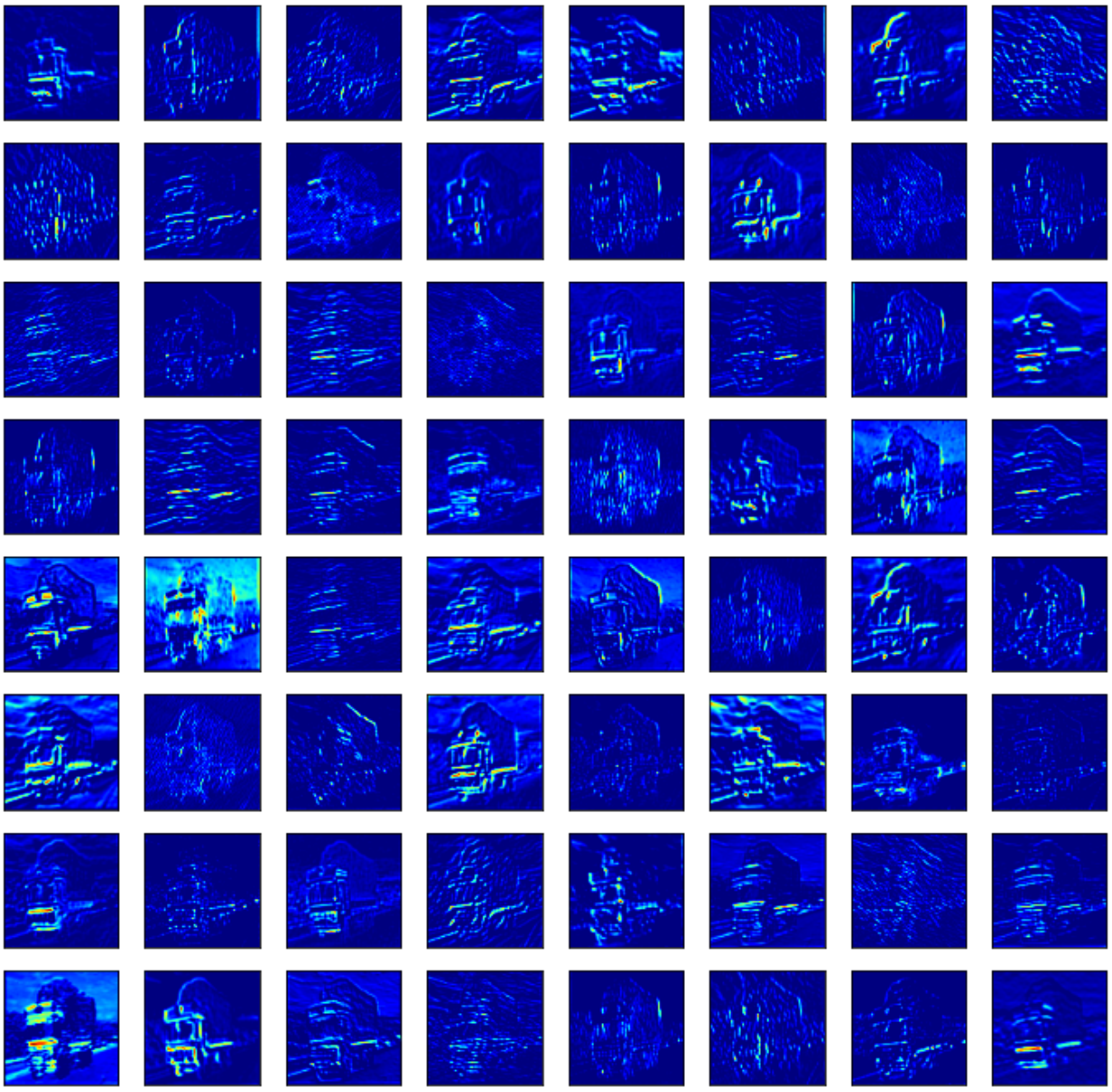
Level - 2



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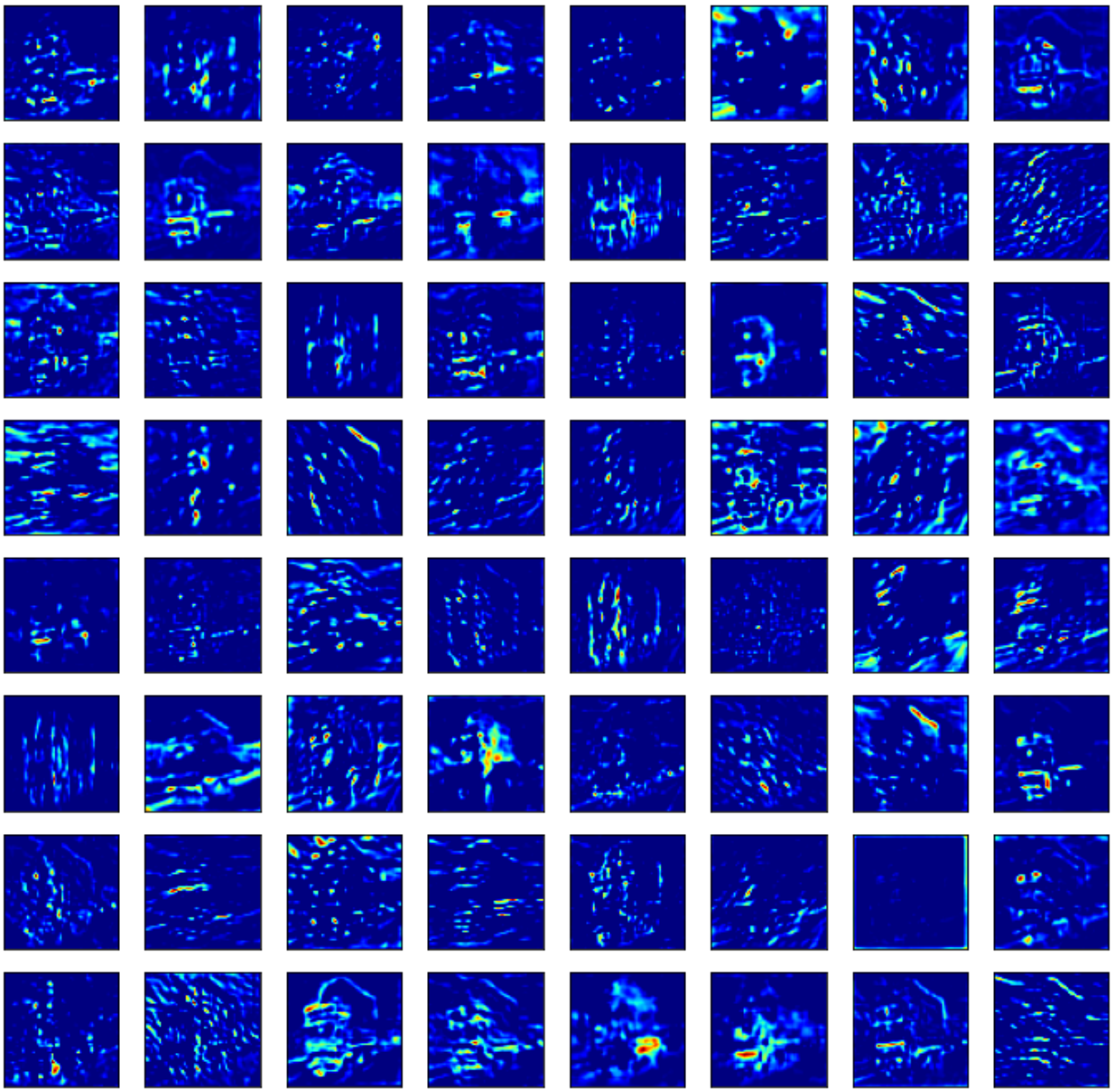
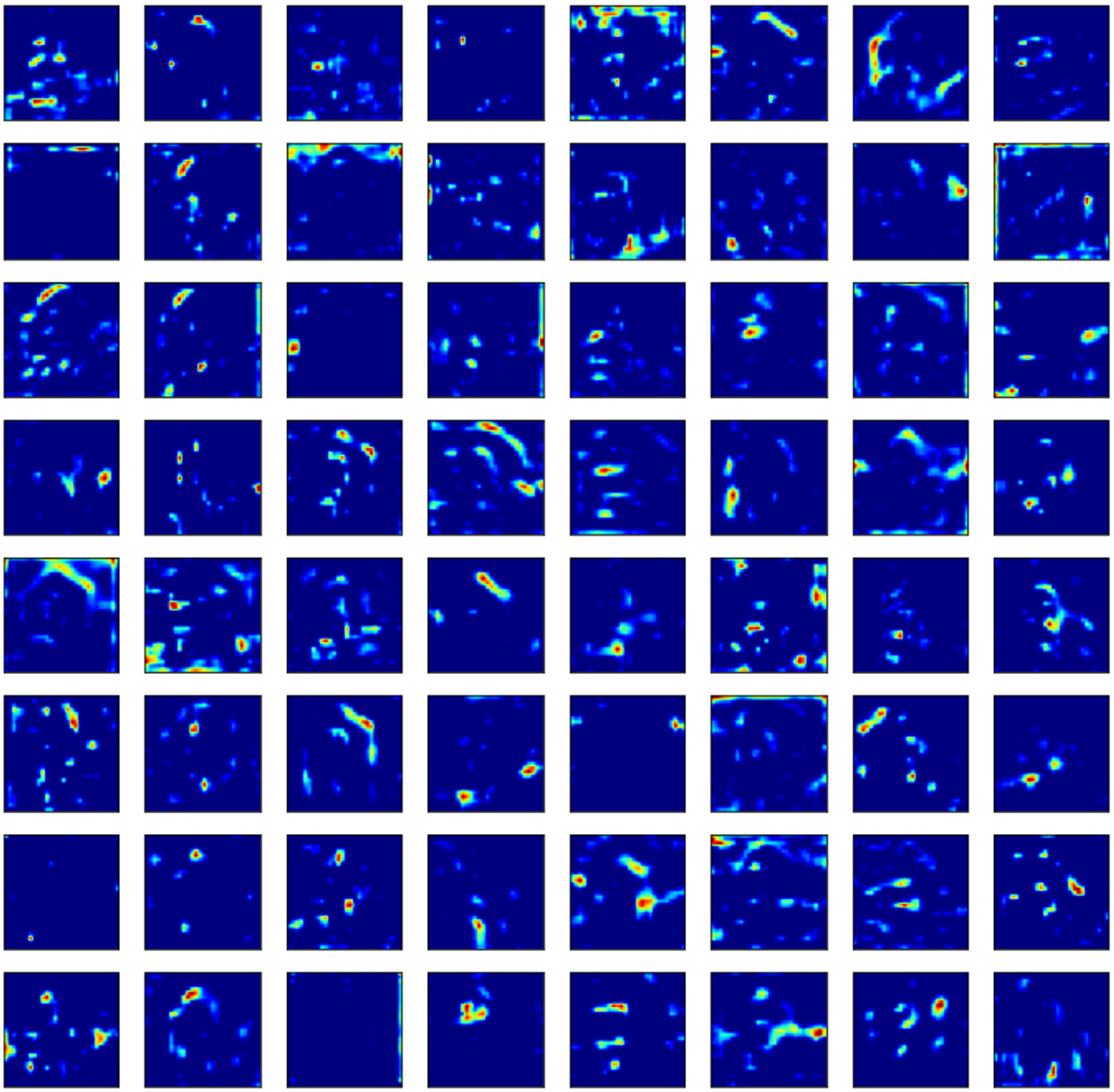
Level - 3



Level - 4



Level - 5