



LOSS :-

Content Loss :- 
$$L_{Total}(G) = \alpha L_{Content}(C, G) + \beta L_{Style}(S, G)$$

$$L_{Content} = \frac{1}{2} \| a^l[c] - a^l[G] \|^2$$

$L_{Style}$

$$G_{ij}^l = \sum_k g_{ik}^l g_{jk}^l$$

$$S_{ij}^l = \sum_k s_{ik}^l s_{jk}^l$$

Basically just multiplying output of a layer with its transpose.  
 $M = AA^T$

$$L_{Style}(g, s) = \sum_{ij} (G_{ij}^l - S_{ij}^l)^2$$