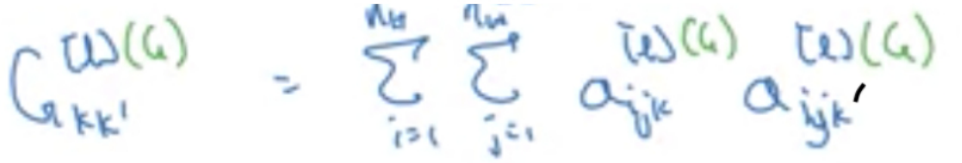
# Style Cost *CORRECTION*

Please note that in the next video at around 8:50 when Andrew wrote down the second formula of matrix, the second factor of the multiplication should be on index k' (k prime), not k (otherwise it does not calculate any kind of covariance). This is shown in black below.



So the formula should be:

$$G^{[l](G)}_{kk'} = \sum_{i=1}^{n_H} \sum_{j=1}^{n_W} a^{[l](G)}_{i,j,k} a^{[l](G)}_{i,j,k'}.$$

Also at 11:08 the style cost function formula should be the squared difference:

$$(G_S - G_G)^2$$

instead of just the difference:

$$(G_S - G_G).$$

The style cost function should be:

$$J^{[l]}_{style}(S,G) = \frac{1}{(2n^{[l]}_H n^{[l]}_W n^{[l]}_C)^2} \sum_k \sum_{k'} \left(G^{[l](S)}_{kk'} - G^{[l](G)}_{kk'}\right)^2$$

Mark as completed