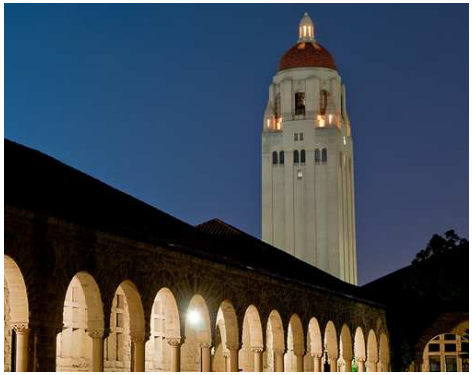
deeplearning.ai

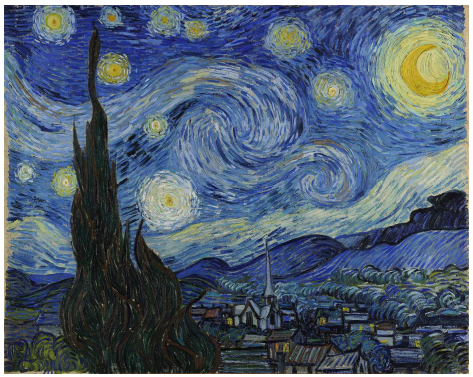
Neural Style Transfer

Cost function

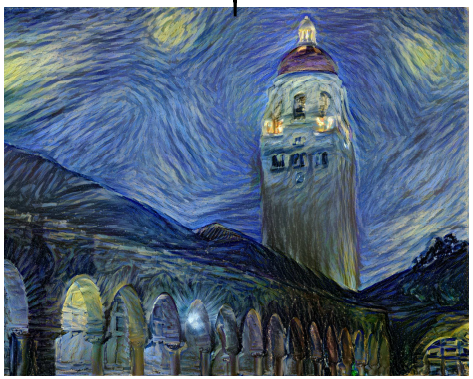
Neural style transfer cost function



Content C



Style S



Generated image G

$$J(G) = \alpha J_{content}(C, G) + \beta J_{style}(S, G)$$

[Gatys et al., 2015. A neural algorithm of artistic style. Images on slide generated by Justin Johnson]

Find the generated image G

1. Initiate G randomly

   G: $100 \times 100 \times 3$

   RGB

2. Use gradient descent to minimize $J(G)$

$$G := G - \frac{\partial}{\partial G} J(G)$$

[Gatys et al., 2015. A neural algorithm of artistic style]