



deeplearning.ai

Neural Style Transfer

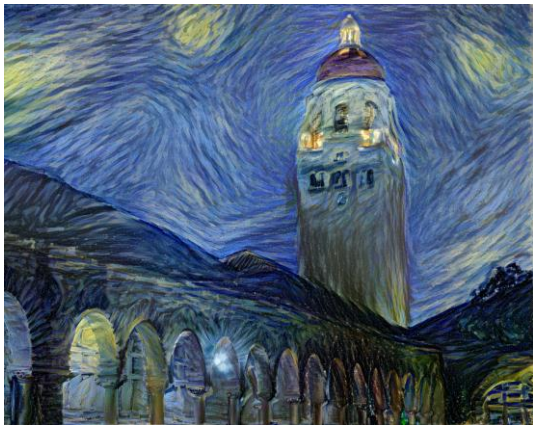
Cost function

Neural style transfer cost function



Content C

Style S



Generated image G

$$\mathcal{J}(G) = \alpha \mathcal{J}_{\text{Content}}(C, G) + \beta \mathcal{J}_{\text{Style}}(S, G)$$

Find the generated image G

1. Initiate G randomly

G: $\underline{100} \times \underline{100} \times \underset{\begin{matrix} \uparrow \\ RGB \end{matrix}}{3}$

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

$$G := G - \frac{d}{2G} J(G)$$

