



deeplearning.ai

Neural Style Transfer

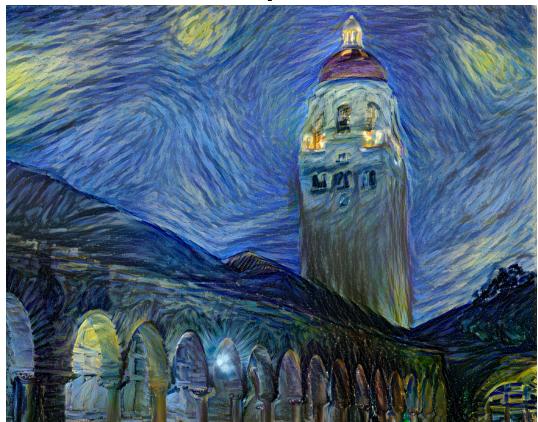
Cost function

Neural style transfer cost function



Content C

Style S



Generated image G

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

Find the generated image G

1. Initiate G randomly

$$G: \underbrace{100 \times 100}_{\text{---}} \times \underbrace{3}_{\text{---}} \xrightarrow{\text{RGB}}$$

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

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

