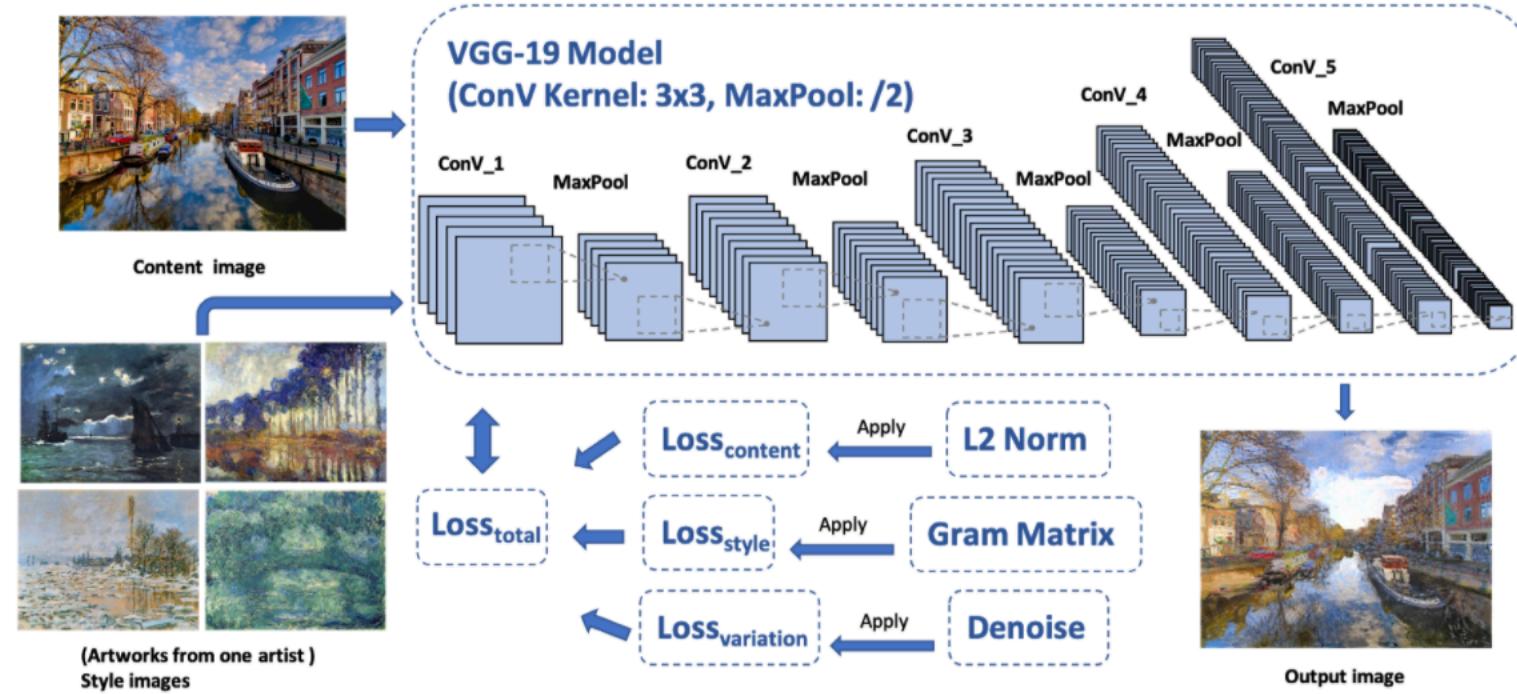


INTRODUCTION

A convolutional neural network that styles an image to resemble an artist's paintings with original color preserved.

APPROACH

- Initialize VGG19 convolutional neural network
- Define loss functions
 - Content Loss : use L2 norm to calculate content difference
 - Style Loss : use inner product of feature maps to calculate the correlations between layers.
 - Total Variation Loss : sum up the absolute differences for neighboring pixel-values

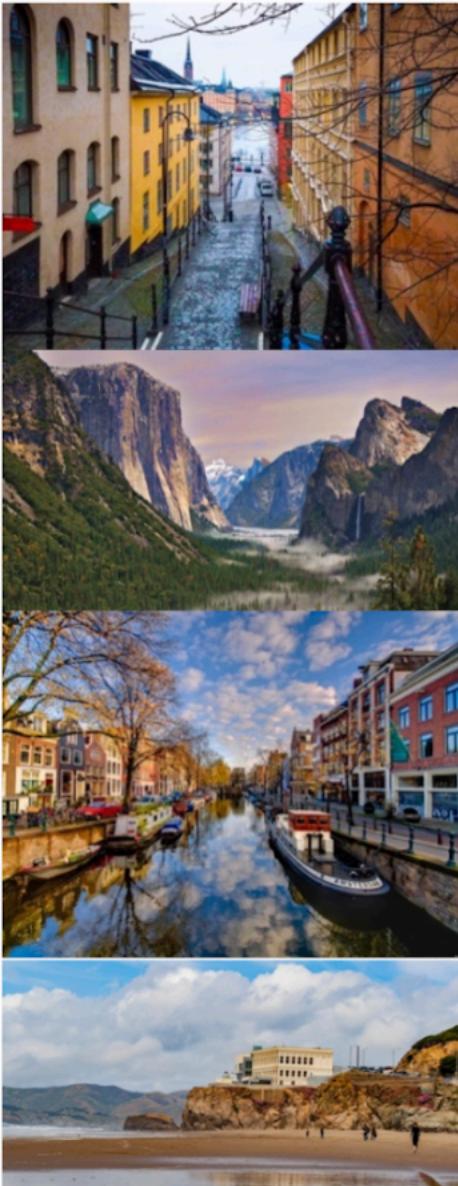


- Set up gradient descent process (L-BFGS)
- Train the model with multiple style images
- Apply color preserving method : Luminance-only transfer

PHOTO PAINT

RESULT

Input



Claude Monet



Vincent van Gogh



Pablo Picasso

