Universal Style Transfer via Feature Transforms

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Content

Problem Statement

Proposed Method

Results Expected

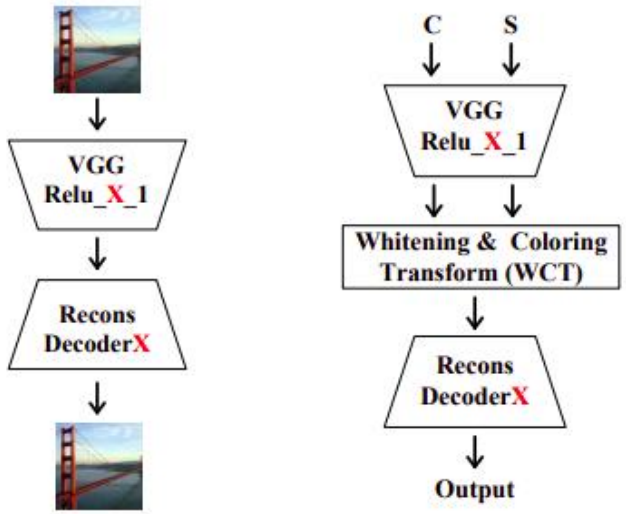
Timeline

Universal Style Transfer via Feature Transforms

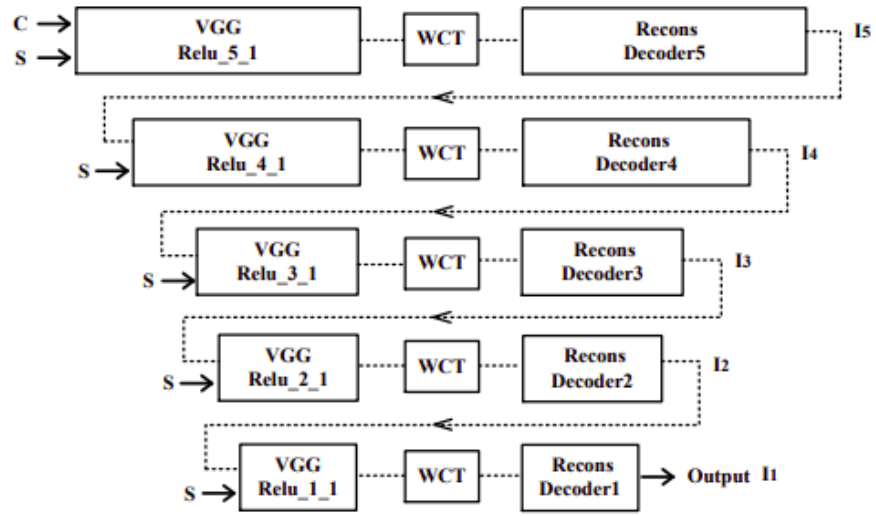
- Universal style transfer aims to transfer arbitrary visual styles to content images.
- We propose a feed forward method to realize the fast transferring for arbitrary styles.
- A pair of feature transformations, whitening and coloring is embedded in an image reconstruction network.
- We present a effective method that does not require training on any pre-defined styles.

Method Overview

- The paper uses VGG-19 network as encoder to extract features. A decoder is then trained to reconstruct original image.
- Original Image and style are both input to the encoder. The combined output is fed to a Whitening and coloring(WCT) module which transform features to match the style.
- The output from WCT is sent to the trained decoder to get the final styled image.
- For higher visual quality multi layer pipeline is used.

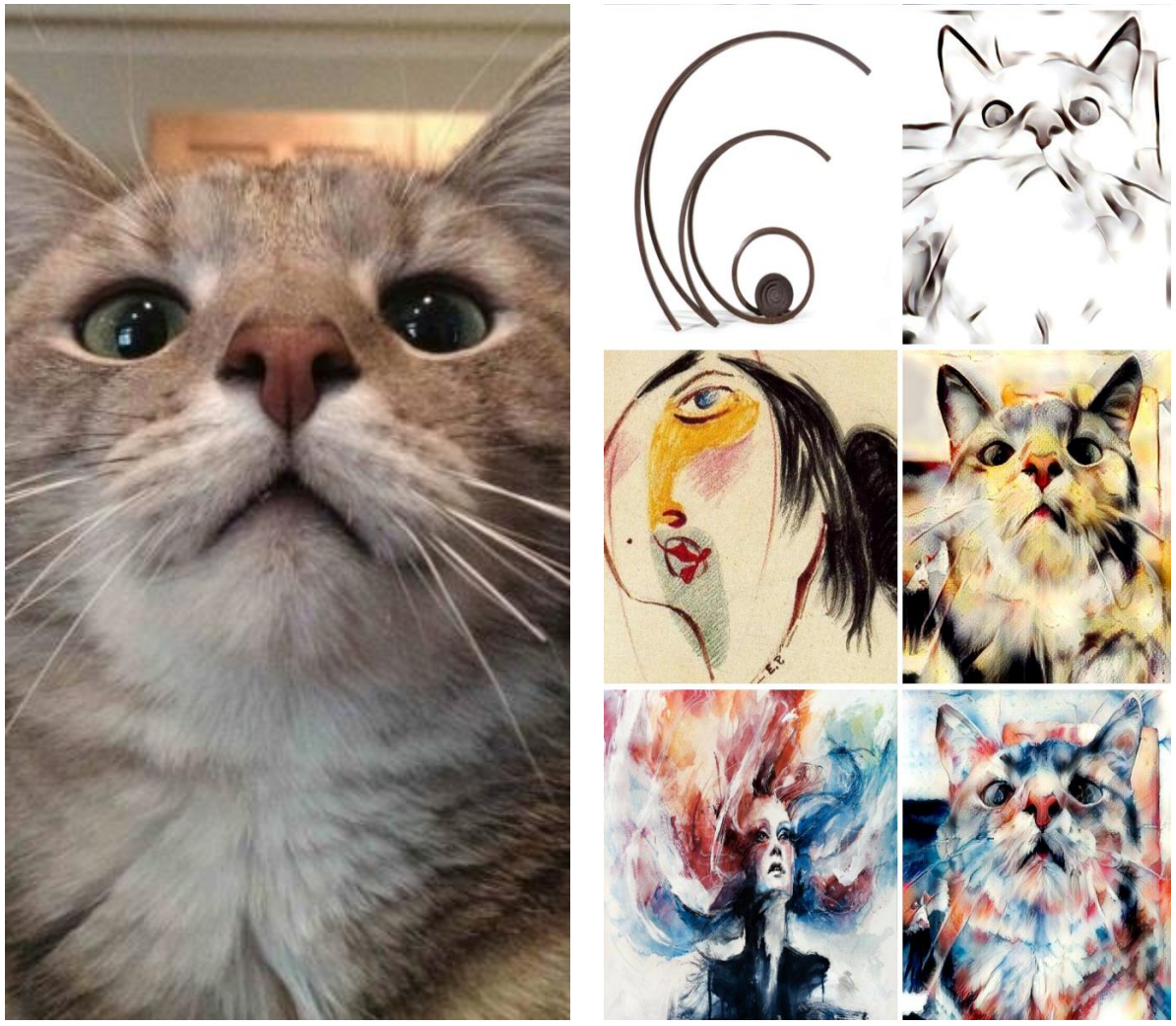


Single-level stylization pipeline



Multi-level stylization pipeline

Input Style Output



Results Expected

Project Timeline

Mid-March – Encoder/Decoder + Whitening module

April – Coloring module and multi-level stylization

Final Deliverable – Complete working pipeline for single-level and multi-level stylization

Thank You

Questions ?