



Video Style Transfer

30-07-2019

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Overview

Coherent Video Style Transfer while maintaining the favourable perceptual styles

Goals

1. Apply style transfer on Videos and check for luminance stability and temporal loss
2. Given a style and a sample video, transfer the style over the video while maintaining consistency as found above
3. Optimize loss function under different illumination effects

Specifications

We aim at achieving style transfer on videos with aim to reduce loss and enhance luminance stability through different kind of models like GANs and encoder-decoder.

We further aim to analyse upon the different mentioned literatures and improve upon it.

Reference

1. ReCoNet: Real-time Coherent Video Style Transfer Network (Gao et al.)
2. Image Style Transfer Using Convolutional Neural Networks (Leon A. Gatys)
3. Learning Linear Transformations for Fast Image and Video Style Transfer (Li et al.)

Milestones

I. Gathering Input Images and Videos to apply the style upon and setting proper FPS and other parameters

Building the base for the Style Transfer on Videos

II. Building Training Pipeline and Architecture of the Model

Building the GANs or encoder-decoder model for the style transfer.

III. Calculation and Optimization of the loss function

Calculate and optimize the loss function using state-of-art literature

IV. Comparison Report and Improvisation

Compare our result with state-of-art literature models .