Paper Readings for Text to Color in Images

S. Gairola

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Abstract

A summary of my paper readings for recent work related to Text to Color using the techniques of NLP, Image Processing and Machine Learniing.

1 Titles Explored in this Report

The report for the paper titles in order.

1. Text2Color : Coloring with Words : Guiding Image Colorization Through Text-based Palette Generation. (ECCV 2018)
2. Tracking Emerges by Colorizing Videos. (ECCV 2018)
3. Imagine This! Scripts to Composites to Videos. (ECCV 2018)
4. Keyword Based Image Color Re-rendering with Semantic Segmentation (ICIP 2017)

The following sections contain the report / summaries for the above work.

2 Text2Color : Coloring with Words (ECCV 2018)

2.1 Goals of the Work

Generate multiple color palettes that reflect the semantics of the input text and then colorize the corresponding grayscale image according to the generated color palattes. A manually curated dataset is introduced for this purpose - Palette-And-Text (PAT). Proposed model called Text2Color consists of 2 conditional GANs :

1. Text to palette generation network
2. Palette based colorization network

In other words, the goal is to learn a relationship between color and text.
Contributrions of the work -

1. DNN architecture that can generate multiple color palettes using natural-language text inputs.

2. Use the generated palatte to produce plausible colorization of gray-scale images.

3. Manually curated dataset (PAT) which contains 10,183 pairs of multi-word text and multi-color palette.

cGANs are used for both the stages. Following 2 sections explain the two stages of Palette Generation and Image Colorization from the generated palettes.

3 Stage 1 : Text to Palette Generation Network (TPN)

4 Conclusions

Here you briefly summarize your findings.