AI Lab project: Colorizing images using PyTorch and common AIML techniques

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1 Introduction

We aim to develop a model in pytorch for black and white image coloring. Since we're dealing mostly with greyscale data, we aim to see how this model performs first on already encountered images, providing a metric for judgment based on on a ground truth, the black and white image and the model result. Then, we check its performance, and maybe work a little longer to see how it behaves on sketches, vectorized images and mangas.

2 Method

Images usually are worked on by using the normal RGB standard to separate the three color values in their respective channels. Since we're dealing with black and white images, we're better off using the LAB standard, which stands for

- L = Lightness channel. This channel indicates how Lightness is affected inside of the image.

- A =

we only hold the L value and try to predict the AB values based on what we've seen so far. At first glance, this may seem an expectation maximization problem based on values AB.

3 Results and ending

4 Credits and links

https://lukemelas.github.io/image-colorization.html
https://colab.research.google.com/github/moein-shariatnia/Deep-Learning/
blob/main/Image%20Colorization%20Tutorial/Image%20Colorization%20with%
20U-Net%20and%20GAN%20Tutorial.ipynb#scrollTo=mGqbGWUQhzmk