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Image Colorization

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ABSTRACT

In older days , the images are in black &white colour . These black & white coloured images doesn't add any reality to pictures . So , this project "Image Colorization" make photos realistic, which gives beauty to the images.

Introduction

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Image colorization is a web application based on deep learning and OpenCV .

It takes the black and white image as input through the web interface, process it to get the coloured image, displays the coloured image on the web page itself and there is also a feature to download the processed image .

Requirements

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Languages: Python , Html , CSS

Packages: NumPy , CV2

Framework: Django

System Requirements: Python 3.0 , Windows/Linux platforms with compatible browser

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Front-end Development :

To interact with the user, we designed a web page using HTML and CSS for front-end UI and easy access.

Back-end Development:

Using CV2 and NumPy modules and with the help of data model, image colouring is done.

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Django Framework:

- It is a high-level python web framework
- It takes care of web applications
- It is an open-source framework

Dataset and Deep Learning :

- The images present in the considered dataset are converted from RGB colour space to "Lab" colour space.

- As L channel encodes colourless intensity , we separate L and ab of the dataset and when we provide black and white image, it checks for the L values and maps the corresponding ab value to give Lab namespace .This Lab is converted into RGB and is displayed in web page.

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Advantages :

- Can provide more reality to images

converts black and white images to coloured images

- Can provide perspective colours like blue for water , green for grass .This is the advantage of this project with previous ones

Disadvantages:

- At some corners, the colours may merge.
- This won't give exact colours but can make image attractive with slight colour changes.

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THANK YOU

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