Cartooning of an Image Using Python

Fundamentals of Artificial intelligence
CSCE 5210

Group 22:

Team Members:
Anvesh Chinta
Sai Krishna Reddy Beluri
Srikanth Reddy Guntaka

Motivation:

Usually, only cartoon specialists make cartoons. with current sophisticated technology and more libraries in python, we can easily create it using our computers. In the currently available model, the cartoon exaggerates the target. This fact is a special feature of cartoons and it makes cartoons as cartoons. But, the exaggeration in the cartoon is very hard to express to every user. To help novices easily create a cartoon, studies that create cartoon-like images using a computer were progressed, called cartoon rendering. But, most cartoon rendering methods couldn't express their results variously, because their results were made by a fixed algorithm. And some other cartoon rendering methods provide various results by textures or user interactions. But, their methods were not intuitive methods. So they were difficult to use to novices.

Significance:

It takes a lot of time and space to create a cartoon effect. Currently, the cartoon-effect solutions available are complicated. Other solutions involve performing certain tasks by the user, while others require installing complex software like Photoshop. ToonyPhotos is an existing website to perform such a task, but it is difficult to use as the user has to mark down points & lines on the image to apply effects, which isn't very user-friendly. Also, the options are limited. In this regard, there is a great need for a site that is user-friendly and which is capable of imposing visual effects on images.

Objectives:

This idea proposes a cartooning method in which every user can easily create cartoon-like result images. we deform the input image using the reference image and apply the cartooning to it. At this time, the user can control the deforming / cartooning intensities of the target image.

Features:

This idea proposed a cartooning method using reference images. It generates the resulting image by deforming the target to the form of the reference image and cartoons on it. It is very easy to use for every user. By adjusting the deformation intensity of the target and the cartooning intensity, users can generate various result images. The proposal of this paper has a restriction of algorithm that the feature point model of the reference image has to be pre-defined and provided. And it also has the limit that the deformation for the exaggeration of the target image can be applied only to the frontal face. The improving method of these problems is being researched now. If the system of this paper adopts the model extracting feature points from the face of diverse angles through the expansion of AAM in the future, it will be able to deform the specific target on the video input. And the research to deform a target image by using several reference images is also in the plan.

References:

[1] https://projectgurukul.org/cartooning-image-opencv-python/
[2] https://www.geeksforgeeks.org/cartooning-an-image-using-opencv-python/

GitHub Link:

https://github.com/Krishreddy11/Cartooning-the-Image