CS-3150

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Homework-5

This homework took me a while, but I learnt a lot in this assignment. I was confused of what I need to do in the beginning, but I think what should I do later.

First input image.

Text

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A picture containing grass, outdoor, photo, field

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Then, I add a lot noise to it so that it will be obvious to show how HSV is more consistent.

And I calculate the MSE value which is about 50000, which is very big.

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A picture containing graphical user interface

Description automatically generated

Then use the demo code to get the saliency map by the original image. We can see that the most focusing part is the dog and part of trees.

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Description automatically generated

A picture containing graphical user interface

Description automatically generated

Since the saliency map values are between 0-1, I normalized them into 255 scale.



Then, find the non-important part based on saliency map, and change the same pixel location ,which located in the original and noisy one, into 0. Because in HSV, those parts are not important. This process is a simulation of HSV.

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Finally, calculate the new MSE value.

0



We can find the new MSE value is much smaller than the previous one. It shows that the HSV is more consistent, because human eyes will mostly focus on the important content of an image.