I have finished the assignment by MATLAB, it is not easy for me, but I enjoy it. There are several steps.

Step1: We should input an image, before doing it, we must clear our command window and workplace in order to process the new information. I hacked up a loop program to quantize each color channel (RGB) to reduce the number of colors (from 256 to 16), then the number of color is reduced to 16 \*16 \* 16 = 4096. We will save the dates into a new matrix which named image\_compress.

Step 2: We should segment the input image to super pixels. Firstly, we should transform the type of the RGB to XYZ by ‘vl\_rgb2xyz’ function. Then we use SLIC algorithms to handle it into superpixels.

Step 3: Compute features of each super pixel. We use‘ hist ’function to compute color histogram feature of each super pixel, which means counting number of pixels for each color and store it in histogram’s bins.

Step4: Compute super pixel feature contrast. Firstly, the saliency of a super pixel should be computed as its feature contrast of all the other super pixels in the image. The formulation for histogram distance is as follows: C:\Users\水晶\AppData\Roaming\Tencent\Users\774910453\QQ\WinTemp\RichOle\JPY)L[F[%(8)5`$PJH_`}@L.pngThen, the distance we get should be normalized.

Step 5: We convert super pixel saliency to pixel saliency. We use the global contrast instead of the original image.

Step6：In order to obtain the final saliency map, we use center prior to enhance the result.

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