CLAIMS

What is claimed is:

1. An image processing method, performed by an electronic device, the method comprising:

obtaining, according to quantities of pixels whose color feature values fall within color feature intervals in an original image, a first histogram corresponding to the original image;

obtaining, according to quantities of pixels whose color feature values fall within the color feature intervals in an upsampled image of the original image, a second histogram corresponding to the upsampled image;

respectively determining, according to the first histogram and the second histogram, target color feature intervals matching the color feature intervals in the second histogram; and

processing, according to the target color feature intervals matching the color feature intervals in the second histogram, the color feature values of the pixels falling within the color feature intervals in the upsampled image, to obtain a target image;

wherein the respectively determining, according to the first histogram and the second histogram, target color feature intervals matching the color feature intervals in the second histogram comprises:

determining differences between ratios corresponding to the color feature intervals in the first histogram and a ratio corresponding to a color feature interval in the second histogram, and determining, from a color feature interval in the first histogram corresponding to a difference satisfying a specified condition, a target color feature interval matching the color feature interval,

wherein a ratio corresponding to each color feature interval in the first histogram is a ratio of a quantity of pixels whose color feature values fall within a corresponding color feature interval in the original image to a total quantity of pixels comprised in the original image, and a ratio corresponding to each color feature interval in the second histogram is a ratio of a quantity of pixels whose color feature values fall within a corresponding color feature interval in the upsampled image to a total quantity of pixels comprised in the upsampled image.

2. The method according to claim 1, wherein when at least two differences satisfy the specified condition, the determining, from a color feature interval in the first histogram corresponding to a difference satisfying a specified condition, a target color feature interval matching the color feature interval comprises:

determining a color feature interval in the first histogram corresponding to each difference of the at least two differences; and

selecting, from at least two determined color feature intervals, a color feature interval with a minimum grade difference from the color feature interval, and determining the color feature interval with the minimum grade difference as the target color feature interval matching the color feature interval.

3. The method according to claim 1, wherein when only one difference satisfies the specified condition, the determining, from a color feature interval in the first histogram corresponding to a difference satisfying a specified condition, a target color feature interval matching the color feature interval comprises:

determining the color feature interval in the first histogram corresponding to the one difference satisfying the specified condition as the target color feature interval matching the color feature interval.

4. The method according to claim 1, wherein the respectively determining, according to the first histogram and the second histogram, target color feature intervals matching the color feature intervals in the second histogram comprises:

determining, according to the first histogram, a first mean value and a first variance that correspond to the color feature intervals of the pixels in the original image;

determining, according to the second histogram, a second mean value and a second variance that correspond to the color feature intervals of the pixels in the upsampled image;

determining a first mapping relationship between the color feature intervals in the first histogram and the color feature intervals in the second histogram according to the first mean value, the first variance, the second mean value, and the second variance; and

determining, according to the first mapping relationship, the target color feature intervals matching the color feature intervals in the second histogram.

5. The method according to any one of claims 1 to 4, wherein the processing, according to the target color feature intervals matching the color feature intervals in the second histogram, the color feature values of the pixels falling within the color feature intervals in the upsampled image, to obtain a target image comprises:

respectively adjusting, when each color feature interval corresponds to a color feature value, the color feature values of the pixels falling within the color feature intervals in the upsampled

image as color feature values corresponding to the target color feature intervals matching the color feature intervals, to obtain the target image; and

respectively determining, when each color feature interval corresponds to a color feature value range, a second mapping relationship between color feature value ranges corresponding to the color feature intervals in the second histogram and color feature value ranges corresponding to the target color feature intervals matching the color feature intervals, and adjusting the color feature values of the pixels falling within the color feature intervals in the upsampled image as color feature values determined according to the second mapping relationship.

6. The method according to any one of claims 1 to 4, wherein the color feature values comprise at least one of the following: a grayscale value of a pixel, a brightness value of the pixel, or a color value of the pixel.

7. An image processing apparatus, comprising:

a first counting module, configured to obtain, according to quantities of pixels whose color feature values fall within color feature intervals in an original image, a first histogram corresponding to the original image;

a second counting module, configured to obtain, according to quantities of pixels whose color feature values fall within the color feature intervals in an upsampled image of the original image, a second histogram corresponding to the upsampled image;

a matching module, configured to respectively determine, according to the first histogram and the second histogram, target color feature intervals matching the color feature intervals in the second histogram; and

a processing module, configured to process, according to the target color feature intervals matching the color feature intervals in the second histogram, the color feature values of the pixels falling within the color feature intervals in the upsampled image, to obtain a target image;

wherein the matching module is further configured to determine differences between ratios corresponding to the color feature intervals in the first histogram and a ratio corresponding to a color feature interval in the second histogram, and determine, from a color feature interval in the first histogram corresponding to a difference satisfying a specified condition, a target color feature interval matching the color feature interval,

wherein a ratio corresponding to each color feature interval in the first histogram is a ratio of a quantity of pixels whose color feature values fall within a corresponding color feature

interval in the original image to a total quantity of pixels comprised in the original image, and a ratio corresponding to each color feature interval in the second histogram is a ratio of a quantity of pixels whose color feature values fall within a corresponding color feature interval in the upsampled image to a total quantity of pixels comprised in the upsampled image.

8. The apparatus according to claim 7, wherein the matching module is further configured to determine, when at least two differences satisfy the specified condition, a color feature interval in the first histogram corresponding to each difference of the at least two differences; and select, from at least two determined color feature intervals, a color feature interval with a minimum grade difference from the color feature interval, and determine the color feature interval with the minimum grade difference as the target color feature interval matching the color feature interval.

9. The apparatus according to claim 7, wherein the matching module is further configured to determine, when only one difference satisfies the specified condition, a color feature interval in the first histogram corresponding to the one difference satisfying the specified condition as the target color feature interval matching the color feature interval.

10. The apparatus according to claim 7, wherein the matching module is further configured to:

determine, according to the first histogram, a first mean value and a first variance that correspond to the color feature intervals of the pixels in the original image;

determine, according to the second histogram, a second mean value and a second variance that correspond to the color feature intervals of the pixels in the upsampled image;

determine a first mapping relationship between the color feature intervals in the first histogram and the color feature intervals in the second histogram according to the first mean value, the first variance, the second mean value, and the second variance; and

determine, according to the first mapping relationship, the target color feature intervals matching the color feature intervals in the second histogram.

11. The apparatus according to any one of claims 7 to 10, wherein the processing module is further configured to:

respectively adjust, when each color feature interval corresponds to a color feature value, the color feature values of the pixels falling within the color feature intervals in the upsampled image as color feature values corresponding to the target color feature intervals matching the color feature intervals, to obtain the target image; and

respectively determine, when each color feature interval corresponds to a color feature value range, a second mapping relationship between color feature value ranges corresponding to the color feature intervals in the second histogram and color feature value ranges corresponding to the target color feature intervals matching the color feature intervals, and adjust the color feature values of the pixels falling within the color feature intervals in the upsampled image as color feature values determined according to the second mapping relationship.

12. The apparatus according to any one of claims 7 to 10, wherein the color feature values comprise at least one of the following: a grayscale value of a pixel, a brightness value of the pixel, or a color value of the pixel.

13. An electronic device, comprising a memory and one or more processors, the memory storing computer-readable instructions, the computer-readable instructions, when executed by the processors, causing the one or more processors to perform the following operations:

obtaining, according to quantities of pixels whose color feature values fall within color feature intervals in an original image, a first histogram corresponding to the original image;

obtaining, according to quantities of pixels whose color feature values fall within the color feature intervals in an upsampled image of the original image, a second histogram corresponding to the upsampled image;

respectively determining, according to the first histogram and the second histogram, target color feature intervals matching the color feature intervals in the second histogram; and

processing, according to the target color feature intervals matching the color feature intervals in the second histogram, the color feature values of the pixels falling within the color feature intervals in the upsampled image, to obtain a target image,

wherein the computer readable instructions, when executed by the processors, cause the one or more processors to further perform the following operations:

determining differences between ratios corresponding to the color feature intervals in the first histogram and a ratio corresponding to any color feature interval in the second histogram, and determining, from a color feature interval in the first histogram corresponding to a difference satisfying a specified condition, a target color feature interval matching the color feature interval, a ratio corresponding to each color feature interval in the first histogram being a ratio of a quantity of pixels whose color feature values fall within a corresponding color feature interval in the original image to a total quantity of pixels comprised in the original image, and a ratio

corresponding to each color feature interval in the second histogram being a ratio of a quantity of pixels whose color feature values in the upsampled image fall within a corresponding color feature interval to a total quantity of pixels comprised in the upsampled image.

14. The electronic device according to claim 13, wherein the computer-readable instructions, when executed by the processors, cause the one or more processors to further perform the following operations:

determining, when at least two differences satisfy the specified condition, a color feature interval in the first histogram corresponding to each difference of the at least two differences; and

selecting, from at least two determined color feature intervals, a color feature interval with a minimum grade difference from the color feature interval, and determining the color feature interval with the minimum grade difference as the target color feature interval matching the color feature interval.

15. The electronic device according to claim 13, wherein the computer-readable instructions, when executed by the processors, cause the one or more processors to further perform the following operations:

determining, when only one difference satisfies the specified condition, a color feature interval in the first histogram corresponding to the one difference satisfying the specified condition as the target color feature interval matching the color feature interval.

16. The electronic device according to claim 13, wherein the computer-readable instructions, when executed by the processors, cause the one or more processors to further perform the following operations:

determining, according to the first histogram, a first mean value and a first variance that correspond to the color feature intervals of the pixels in the original image;

determining, according to the second histogram, a second mean value and a second variance that correspond to the color feature intervals of the pixels in the upsampled image;

determining a first mapping relationship between the color feature intervals in the first histogram and the color feature intervals in the second histogram according to the first mean value, the first variance, the second mean value, and the second variance; and

determining, according to the first mapping relationship, the target color feature intervals matching the color feature intervals in the second histogram.

17. A non-volatile storage medium storing computer-readable instructions, the computer-readable instructions, when executed by a processor, causing the processor to perform the method according to any one of claims 1 to 6.