CLAIMS

1. An image generation method, comprising:

obtaining an original image; and

inputting the original image into a trained generative adversarial network, and processing the original image using the trained generative adversarial network to obtain a first generated image, wherein training data of the generative adversarial network comprises a sample image set and a second generated image, the second generated image comprises at least part of images in a generated image set, and the generated image set represents generated images obtained by processing the sample image set using the generative adversarial network;

wherein the method further comprises:

obtaining an overfitting parameter, the overfitting parameter representing a degree of overfitting of a discriminator of the generative adversarial network; and

obtaining the second generated image matching the overfitting parameter in number from the generated image set.

2. The method of claim 1, wherein the obtaining an overfitting parameter comprises:

obtaining at least one of a first discrimination result or a second discrimination result, the first discrimination result representing a discrimination result corresponding to the sample image set, and the second discrimination result representing a discrimination result corresponding to the generated image set; and

obtaining the overfitting parameter according to the obtained at least one of the first discrimination result or the second discrimination result.

3. The method of claim 2, wherein the obtaining the overfitting parameter according to the obtained at least one of the first discrimination result or the second discrimination result comprises one of following items:

taking a first average value as the overfitting parameter, the first average value representing an average value of a sign function of a logarithmic output of the first discrimination result;

taking an opposite number of a second average value as the overfitting parameter, the second average value representing an average value of a sign function of a logarithmic output of the second discrimination result; or

taking half of a difference between the first average value and the second average value as the overfitting parameter.

4. The method of claim 2 or 3, wherein the obtaining the second generated image matching the overfitting parameter in number from the generated image set comprises:

determining a selection probability, the selection probability representing a probability of selecting an image from the generated image set;

updating a value of the selection probability according to a value of the overfitting parameter, to obtain an updated selection probability, the value of the overfitting parameter being positively correlated with the updated selection probability; and

selecting the second generated image matching the overfitting parameter in number from the generated image set according to the updated selection probability.

5. The method of claim 4, wherein the updating a value of the selection probability according to a value of the overfitting parameter, to obtain an updated selection probability comprises one of following items:

in a case where the value of the overfitting parameter is greater than a set threshold, increasing the value of the selection probability to obtain the updated selection probability; or

in a case where the value of the overfitting parameter is less than or equal to a set threshold, decreasing the value of the selection probability to obtain the updated selection probability.

6. The method of any one of claims 1 to 5, further comprising:

obtaining a preset selection probability; and selecting the second generated image from the generated image set according to the preset selection probability.

7. A neural network training method, comprising:

inputting a sample image set into a generative adversarial network, and processing the sample image set using the generative adversarial network, to obtain a generated image set;

obtaining a second generated image, the second generated image comprising at least part of images in the generated image set; and

taking the sample image set and the second generated image as training data of the generative adversarial network, and training the generative adversarial network according to the training data;

wherein the obtaining a second generated image comprises:

obtaining an overfitting parameter, the overfitting parameter representing a degree of overfitting of a discriminator of the generative adversarial network; and

obtaining the second generated image matching the overfitting parameter in number from the generated image set.

8. The method of claim 7, wherein the obtaining an overfitting parameter comprises:

obtaining at least one of a first discrimination result or a second discrimination result, the first discrimination result representing a discrimination result corresponding to the sample image set, and the second discrimination result representing a discrimination result corresponding to the generated image set; and

obtaining the overfitting parameter according to the obtained at least one of the first discrimination result or the second discrimination result.

9. The method of claim 8, wherein the obtaining the overfitting parameter according to the obtained at least one of the first discrimination result or the second discrimination result comprises one of following items:

taking a first average value as the overfitting parameter, the first average value representing an average value of a sign function of a logarithmic output of the first discrimination result;

taking an opposite number of a second average value as the overfitting parameter, the second average value representing an average value of a sign function of a logarithmic output of the second discrimination result; or

taking half of a difference between the first average value and the second average value as the overfitting parameter.

10. The method of 8 or 9, wherein the obtaining the second generated image matching the overfitting parameter in number from the generated image set comprises:

determining a selection probability, the selection probability representing a probability of selecting an image from the generated image set;

updating a value of the selection probability according to a value of the overfitting parameter, to obtain an updated selection probability, the value of the overfitting parameter being positively correlated with the updated selection probability; and

selecting the second generated image matching the overfitting parameter in number from the generated image set according to the updated selection probability.

11. The method of claim 10, wherein the updating a value of the selection probability according to a value of the overfitting parameter, to obtain an updated selection probability comprises one of the following items:

in a case where the value of the overfitting parameter is greater than a set threshold, increasing the value of the selection probability to obtain the updated selection probability; and in a case where the value of the overfitting parameter is less than or equal to a set threshold, decreasing the value of the selection probability to obtain the updated selection probability.

12 The method of any one of claims 7 to 11, wherein the obtaining a second generated image comprises:

obtaining a preset selection probability; and selecting the second generated image from the generated image set according to the preset selection probability.

13. An electronic device, comprising a processor and a memory configured to store a computer program capable of running in the processor,

wherein the processor is configured to run the computer program to execute an image generation method;

wherein the image generation method comprises:

obtaining an original image; and

inputting the original image into a trained generative adversarial network, and processing the original image using the trained generative adversarial network to obtain a first generated image, wherein training data of the generative adversarial network comprises a sample image set and a second generated image, the second generated image comprises at least part of images in a generated image set, and the generated image set represents generated images obtained by processing the sample image set using the generative adversarial network;

wherein the method further comprises:

obtaining an overfitting parameter, the overfitting parameter representing a degree of overfitting of a discriminator of the generative adversarial network; and

obtaining the second generated image matching the overfitting parameter in number from the generated image set.

14. An electronic device, comprising a processor and a memory configured to store a computer program capable of running in the processor,

wherein the processor is configured to run the computer program to execute a neural network training method;

wherein the neural network training method comprises:

inputting a sample image set into a generative adversarial network, and processing the sample image set using the generative adversarial network, to obtain a generated image set;

obtaining a second generated image, the second generated image comprising at least part of images in the generated image set; and

taking the sample image set and the second generated image as training data of the generative adversarial network, and training the generative adversarial network according to the training data;

wherein the obtaining a second generated image comprises:

obtaining an overfitting parameter, the overfitting parameter representing a degree of overfitting of a discriminator of the generative adversarial network; and

obtaining the second generated image matching the overfitting parameter in number from the generated image set.

15. A computer storage medium, having a computer program stored thereon, the computer program, when executed by a processor, implementing an image generation method;

wherein the image generation method comprises:

obtaining an original image; and

inputting the original image into a trained generative adversarial network, and processing the original image using the trained generative adversarial network to obtain a first generated image, wherein training data of the generative adversarial network comprises a sample image set and a second generated image, the second generated image comprises at least part of images in a generated image set, and the generated image set represents generated images obtained by processing the sample image set using the generative adversarial network;

wherein the method further comprises:

obtaining an overfitting parameter, the overfitting parameter representing a degree of overfitting of a discriminator of the generative adversarial network; and

obtaining the second generated image matching the overfitting parameter in number from the generated image set.

16. A computer storage medium, having a computer program stored thereon, the computer program, when executed by a processor, implementing a neural network training method;

wherein the neural network training method comprises:

inputting a sample image set into a generative adversarial network, and processing the sample image set using the generative adversarial network, to obtain a generated image set;

obtaining a second generated image, the second generated image comprising at least part of images in the generated image set; and

taking the sample image set and the second generated image as training data of the generative adversarial network, and training the generative adversarial network according to the training data;

wherein the obtaining a second generated image comprises:

obtaining an overfitting parameter, the overfitting parameter representing a degree of overfitting of a discriminator of the generative adversarial network; and

obtaining the second generated image matching the overfitting parameter in number from the generated image set.

17. A computer program, comprising a computer-readable code, wherein in a case where the computer-readable code runs in an electronic device, a processor of the electronic device executes an image generation method;

wherein the image generation method comprises:

obtaining an original image; and

inputting the original image into a trained generative adversarial network, and processing the original image using the trained generative adversarial network to obtain a first generated image, wherein training data of the generative adversarial network comprises a sample image set and a second generated image, the second generated image comprises at least part of images in a generated image set, and the generated image set represents generated images obtained by processing the sample image set using the generative adversarial network;

wherein the method further comprises:

obtaining an overfitting parameter, the overfitting parameter representing a degree of overfitting of a discriminator of the generative adversarial network; and

obtaining the second generated image matching the overfitting parameter in number from the generated image set.

18. A computer program, comprising a computer-readable code, wherein in a case where the computer-readable code runs in an electronic device, a processor of the electronic device executes a neural network training method;

wherein the neural network training method comprises:

inputting a sample image set into a generative adversarial network, and processing the sample image set using the generative adversarial network, to obtain a generated image set;

obtaining a second generated image, the second generated image comprising at least part of images in the generated image set; and

taking the sample image set and the second generated image as training data of the generative adversarial network, and training the generative adversarial network according to the training data;

wherein the obtaining a second generated image comprises:

obtaining an overfitting parameter, the overfitting parameter representing a degree of overfitting of a discriminator of the generative adversarial network; and

obtaining the second generated image matching the overfitting parameter in number from the generated image set.