

CLAIMS

1. A neural network training method, comprising:

labeling annotation information of a first clothing instance and a second clothing instance, wherein the first clothing instance and the second clothing instance are respectively from a first clothing image and a second clothing image;

pairing the first clothing image and the second clothing image in response to a state of matching between the first clothing instance and the second clothing instance; and

training a neural network to be trained based on the paired first clothing image and second clothing image.

2. The method according to claim 1, wherein labeling the annotation information of the first clothing instance and the second clothing instance comprises:

respectively labeling clothing bounding boxes of the first clothing instance and the second clothing instance.

3. The method according to claim 2, wherein labeling the annotation information of the first clothing instance and the second clothing instance further comprises:

respectively labeling clothing categories and key points of the first clothing instance and the second clothing instance.

4. The method according to claim 3, wherein labeling the annotation information of the first clothing instance and the second clothing instance further comprises: respectively labeling clothing outlines and segmentation mask annotations of the first clothing instance and the second clothing instance.

5. The method according to claim 4, wherein respectively labeling the clothing categories and the key points of the first clothing instance and the second clothing instance comprises:

respectively acquiring the clothing categories of the first clothing instance and the second clothing instance; and

respectively labeling the corresponding key points of the first clothing instance and the second clothing instance based on a labeling rule of the clothing categories.

6. The method according to claim 5, after the respectively labeling the clothing categories and the key points of the first clothing instance and the second clothing instance, further comprising:

labeling attribute information of each of the key points, wherein the attribute information is used for indicating whether the key point is a visible point or a blocked point.

7. The method according to claim 6, wherein labeling the annotation information of the first clothing instance and the second clothing instance further comprises:

respectively labeling edge points and intersection points of the first clothing instance and the second clothing instance, wherein the edge points are points of the clothing instances on the boundaries of clothing images, and the intersection points are points located at positions where the first clothing instance or the second clothing instance intersects other clothing instances and used for drawing the clothing outlines.

8. The method according to claim 7, wherein respectively labeling the clothing outlines of the first clothing instance and the second clothing instance comprises:

respectively drawing the clothing outlines of the first clothing instance and the second clothing instance respectively based on the key points, the attribute information of each of the key points, the edge points, and the intersection points of the first clothing instance and the second clothing instance.

9. The method according to claim 8, wherein the respectively labeling the segmentation mask annotations of the first clothing instance and the second clothing instance comprises:

respectively generating corresponding preliminary segmentation mask maps based on the clothing outlines of the first clothing instance and the second clothing instance; and

correcting the preliminary segmentation mask maps to obtain the segmentation mask annotations.

10. The method according to any one of claims 1 to 9, wherein pairing the first clothing image and the second clothing image comprises: configuring identical product identifiers for the first clothing instance and the second clothing instance.

11. An image matching method, comprising:

receiving a third clothing image to be matched;

extracting a third clothing instance from the third clothing image;

acquiring annotation information of the third clothing instance; and

querying a matched fourth clothing instance based on the annotation information of the third clothing instance.

12. The method according to claim 11, before extracting the third clothing instance from the third clothing image, further comprising:

performing feature extraction on the third clothing image.

13. The method according to claim 11 or 12, wherein acquiring the annotation information of the third clothing instance comprises:

acquiring a key point, a clothing category, a clothing bounding box, and a segmentation mask annotation of the third clothing instance.

14. The method according to any one of claims 11 to 13, wherein querying the matched fourth clothing instance based on the annotation information of the third clothing instance comprises:

determining, based on the annotation information of the third clothing instance and annotation information of at least one clothing instance to be queried, similarity information between the third clothing instance and each clothing instance to be queried; and

determining the fourth clothing instance matching the third clothing instance based on the similarity information between the third clothing instance and the each clothing instance to be queried.

15. A neural network training apparatus, comprising:

an labeling module, configured to label annotation information of a first clothing instance and a second clothing instance, wherein the first clothing instance and the second clothing instance are respectively from a first clothing image and a second clothing image, and to pair the first clothing image and the second clothing image in response to a state of matching between the first clothing instance and the second clothing instance; and

a training module, configured to train a neural network to be trained based on the paired first clothing image and second clothing image.

16. The apparatus according to claim 15, wherein the labeling module is configured to:

respectively label clothing bounding boxes of the first clothing instance and the second clothing instance.

17. An image matching apparatus, comprising:

a receiving module, configured to receive a third clothing image to be matched;

an extracting module, configured to extract a third clothing instance from the third clothing image and to acquire annotation information of the third clothing instance; and

a matching module, configured to query a matched fourth clothing instance based on the annotation information of the third clothing instance.

18. A storage medium, having a computer program stored thereon, wherein the computer program enables a computer device to execute the operations of the method according to any one of claims 1 to 10 or the operations of the method according to any one of claims 11 to 14.

19. A computer program product, comprising computer executable instructions, wherein after being executed, the computer executable instructions can implement the operations of the method according to any one of claims 1 to 10 or the operations of the method according to any one of claims 11 to 14.

20. A computer device, comprising a memory and a processor, wherein the memory stores computer executable instructions, and when running the computer executable instructions on the memory, the processor implements the operations of the method according to any one of claims 1 to 10 or the operations of the method according to any one of claims 11 to 14.