CLAIMS

What is claimed is:

1. A preprocessing method for remote sensing images, comprising:

dividing a global remote sensing image into a plurality of sub-image regions based on a predetermined method;

obtaining prior knowledge of the sub-image region; and

determining, for any sub-image region, image point features of a plurality of image points in the sub-image region by a feature extraction model based on the prior knowledge;

clustering, for any sub-image region, image points in the sub-image region based on image point features in the sub-image region, and determining a cluster center to which the image points in the sub-image region belong; and

using cluster centers corresponding to image points in the plurality of sub-image regions as representations of the corresponding sub-image regions to adjust a remote sensing model.

2. The method according to claim 1, wherein the step of dividing a global remote sensing image into a plurality of sub-image regions based on a predetermined method comprises:

dividing the global remote sensing image based on a predetermined remote sensing tile-level size; or

dividing the global remote sensing image based on geographical regions comprised in the global remote sensing image.

3. The method according to claim 1, wherein the step of determining the image point features of the plurality of image points in the sub-image region by the feature extraction model based on the prior knowledge comprises:

dividing the sub-image region into a plurality of patches; and

for any patch, inputting the prior knowledge and the patch into the feature extraction model to obtain image point features of a plurality of image points in the patch.

4. The method according to claim 1, wherein a size of the image point comprises a predetermined pixel-level size.

5. A representation determining method for remote sensing images, comprising:

obtaining a first remote sensing image to be processed and first position information of the

first remote sensing image;

determining, based on the first position information, a first sub-image region having position information that matches the first position information from a plurality of sub-image regions comprised in a global remote sensing image;

determining a target image point corresponding to the first remote sensing image from image points comprised in the first sub-image region;

determining, from pre-obtained correspondences between the image points and cluster centers, a cluster center to which the target image point belongs, wherein the image points and the corresponding cluster centers are determined based on the method according to claim 1; and

determining a representation of the first remote sensing image based on the cluster center to which the target image point belongs.

6. The method according to claim 5, wherein the step of determining a target image point corresponding to the first remote sensing image from image points comprised in the first sub-image region comprises:

determining the target image point corresponding to the first remote sensing image in the first sub-image region based on the position information of the first sub-image region and positions of a plurality of image points in the first sub-image region.

7. The method according to claim 5, wherein the step of determining a cluster center to which the target image point belongs comprises:

determining the cluster center to which the target image point belongs from the pre-obtained correspondences between the image points comprised in the first sub-image region and the cluster centers.

8. The method according to claim 5, wherein the step of determining a representation of the first remote sensing image comprises:

performing feature fusion on the cluster center to which the target image point belongs and the first remote sensing image to obtain the representation of the first remote sensing image.

9. The method according to claim 8, wherein the step of performing feature fusion on the cluster center to which the target image point belongs and the first remote sensing image comprises:

when there are a plurality of target image points, concatenating cluster centers to which the plurality of target image points belong, to obtain a concatenated representation; and

performing feature fusion on the concatenated representation and image features of the first

remote sensing image.

10. A preprocessing apparatus for remote sensing images, comprising:

a region division module, configured to divide a global remote sensing image into a plurality of sub-image regions based on a predetermined method;

a feature extraction module, configured to obtain prior knowledge of any sub-image region, and determine, for any sub-image region, image point features of a plurality of image points in the sub-image region by a feature extraction model based on the prior knowledge;

an image point clustering module, configured to cluster, for any sub-image region, image points in the sub-image region based on image point features in the sub-image region, and determine a cluster center to which the image points in the sub-image region belong; and

a representation determining module, configured to use cluster centers corresponding to image points in the plurality of sub-image regions as representations of the corresponding sub-image regions to adjust a remote sensing model.

11. A representation determining apparatus for remote sensing images, comprising:

an image acquisition module, configured to obtain a first remote sensing image to be processed and first position information of the first remote sensing image;

a region matching module, configured to determine, based on the first position information, a first sub-image region having position information that matches the first position information from a plurality of sub-image regions comprised in a global remote sensing image;

an image point determining module, configured to determine a target image point corresponding to the first remote sensing image from image points comprised in the first sub-image region;

a cluster determining module, configured to determine, from pre-obtained correspondences between the image points and cluster centers, a cluster center to which the target image point belongs, wherein the image points and the corresponding cluster centers are determined based on the method according to claim 1; and

a representation determining module, configured to determine a representation of the first remote sensing image based on the cluster center to which the target image point belongs.

12. A computer-readable storage medium, storing a computer program, wherein the computer program, when being executed in a computer, causes the computer to perform the method according to any one of claims 1 to 9.

13. A computing device, comprising a storage and a processor, wherein the storage stores executable code, and when executing the executable code, the processor implements the method according to any one of claims 1 to 9.