CLAIMS

What is claimed is:

1. A wine label recognition method, comprising:

obtaining a wine image, and performing optical character recognition (OCR) on the wine image in a preset OCR manner, to obtain text comprised in the wine image;

performing deep learning recognition on the wine image in a preset deep learning recognition manner, to obtain an image feature comprised in the wine image; and

sifting out a target wine label matching the text and the image feature from a preset wine label database according to the text and the image feature, and using the target wine label as a wine label corresponding to the wine image, comprising:

counting a text similarity between the text and preset wine label text corresponding to an existing preset wine label in the preset wine label database;

determining whether the text similarity is greater than or equal to a preset text similarity threshold;

using the preset wine label text as target text, and using the target text as text corresponding to the wine image in a case where the text similarity is greater than or equal to the preset text similarity threshold;

sifting out preset wine labels matching the text from the preset wine label database according to the text, and combining the preset wine labels into a collection to obtain a target wine label collection;

sifting out a wine label with a highest matching degree with the image feature from the target wine label collection according to the image feature as the target wine label, and using the target wine label as a wine label corresponding to the wine image; wherein the wine image comprises a plurality of images of the same target wine;

using a target wine label corresponding to each image as a wine label corresponding to the image;

classifying wine labels belonging to the same wine label among all the wine labels respectively corresponding to the images into the same type of wine labels;

counting the number of wine labels comprised in each same type of wine labels; and

selecting, according to the number of wine labels comprised in each same type of wine labels, a wine label with the largest value among all the same types of wine labels as a target wine label corresponding to the target wine;

wherein the step of sifting out a wine label with a highest matching degree with the image feature from the target wine label collection according to the image feature as the target wine label, and using the target wine label as a wine label corresponding to the wine image comprises:

counting an image similarity between the image feature and a preset wine label included in the target wine label collection to obtain all the image similarities;

sifting out a target image similarity with the highest image similarity among all the image similarities;

determining whether the target image similarity is greater than or equal to a preset image similarity threshold; and

using a preset wine label corresponding to the target image similarity as the target wine label, and using the target wine label as the wine label corresponding to the wine image in a case where the target image similarity is greater than or equal to the preset image similarity threshold.

2. A wine information management method, applied to a server side, and comprising:

obtaining wine information, wherein the wine information comprises a wine image;

performing recognition on the wine image according to the wine label recognition method according to claim 1 to obtain a wine label comprised in the wine image; and

managing the wine information based on the wine label.

3. A wine information management method, applied to a terminal, and comprising:

sending a wine information obtaining request to a preset server in response to an operation of a user, so that the preset server obtains target wine information corresponding to the wine information obtaining request according to the wine information obtaining request, and returns the target wine information to the terminal, wherein the target wine information comprises wine information associated based on a preset wine label, and the preset wine label is obtained by performing recognition on a wine image according to the wine label recognition method according to claim 1;

receiving the target wine information sent by the preset server; and

displaying the target wine information, so that the user obtains the target wine information.

4. A wine label recognition apparatus, comprising:

a first recognition unit, configured to obtain a wine image, and perform optical character recognition (OCR) on the wine image in a preset OCR manner, to obtain text comprised in the

wine image;

a second recognition unit, configured to perform deep learning recognition on the wine image in a preset deep learning recognition manner, to obtain an image feature comprised in the wine image; and

a first screening unit, configured to perform sifting out a target wine label matching the text and the image feature from a preset wine label database according to the text and the image feature, and use the target wine label as a wine label corresponding to the wine image;

wherein the step of sifting out a target wine label matching the text and the image feature from a preset wine label database according to the text and the image feature, and using the target wine label as a wine label corresponding to the wine image comprises:

counting a text similarity between the text and preset wine label text corresponding to an existing preset wine label in the preset wine label database;

determining whether the text similarity is greater than or equal to a preset text similarity threshold;

using the preset wine label text as target text, and using the target text as text corresponding to the wine image in a case where the text similarity is greater than or equal to the preset text similarity threshold;

sifting out preset wine labels matching the text from the preset wine label database according to the text, and combining the preset wine labels into a collection to obtain a target wine label collection;

sifting out a wine label with a highest matching degree with the image feature from the target wine label collection according to the image feature as the target wine label, and using the target wine label as a wine label corresponding to the wine image; wherein the wine image comprises a plurality of images of the same target wine;

using a target wine label corresponding to each image as a wine label corresponding to the image;

classifying wine labels belonging to the same wine label among all the wine labels respectively corresponding to the images into the same type of wine labels;

counting the number of wine labels comprised in each same type of wine labels; and

selecting, according to the number of wine labels comprised in each same type of wine labels, a wine label with the largest value among all the same types of wine labels as a target wine label corresponding to the target wine;

wherein the step of sifting out a wine label with a highest matching degree with the image feature from the target wine label collection according to the image feature as the target wine label, and using the target wine label as a wine label corresponding to the wine image comprises:

counting an image similarity between the image feature and a preset wine label included in the target wine label collection to obtain all the image similarities;

sifting out a target image similarity with the highest image similarity among all the image similarities;

determining whether the target image similarity is greater than or equal to a preset image similarity threshold; and

using a preset wine label corresponding to the target image similarity as the target wine label, and using the target wine label as the wine label corresponding to the wine image in a case where the target image similarity is greater than or equal to the preset image similarity threshold.

5. A wine information management apparatus, applied to a server side, and comprising:

an obtaining unit, configured to obtain wine information, wherein the wine information comprises a wine image;

a third recognition unit, configured to perform recognition on the wine image according to the wine label recognition method according to claim 1 to obtain a wine label comprised in the wine image; and

a management unit, configured to manage the wine information based on the wine label.

6. A wine information management apparatus, applied to a terminal, and comprising:

a sending unit, configured to send a wine information obtaining request to a preset server in response to an operation of a user, so that the preset server obtains target wine information corresponding to the wine information obtaining request according to the wine information obtaining request, and returns the target wine information to the terminal, wherein the target wine information comprises wine information associated based on a preset wine label, and the preset wine label is obtained by performing recognition on a wine image according to the wine label recognition method according to claim 1;

a receiving unit, configured to receive the target wine information sent by the preset server; and

a display unit, configured to display the target wine information, so that the user obtains the target wine information.

7. A computer device, comprising a memory and a processor connected to the memory, wherein the memory is configured to store a computer program, and the processor is configured to run the computer program to perform the steps in the method according to claim 1, or perform the steps in the method according to claim 2, or perform the steps in the method according to claim 3.

8. A computer-readable storage medium, wherein the storage medium stores a computer program, and the computer program, when executed by a processor, implements the steps in the method according to claim 1, or implements the steps in the method according to claim 2, or implements the steps in the method according to claim 3.