

CLAIMS

What is claimed is:

1. A method for detecting a face key point, comprising:

acquiring image data containing a face;

detecting a first face key point of the face in the image data;

identifying a face type of the face according to the first face key point;

performing position correction on the first face key point with reference to the face type;

extracting a facial features image containing facial features from the image data based on the first face key point subjected to the position correction; and

detecting a second face key point of the face in the facial features image,

wherein identifying the face type of the face according to the first face key point comprises:

calculating a posture angle of the face using the first face key point; and

identifying the face type of the face based on the posture angle of the face,

wherein performing the position correction on the first face key point with reference to the face type comprises:

searching for a position correcting model corresponding to the face type;

extracting a second face image containing the face from the image data based on the first face key point; and

inputting the second face image into the position correcting model to perform position correction on the first face key point.

2. The method according to claim 1, wherein detecting the first face key point of the face in the image data comprises:

extracting a first face image containing the face from the image data; and

inputting the first face image into a preset face key point detecting model to obtain a first face key point of the face, ~~wherein the first face key point of the face is output by the face key point detecting model.~~

~~3. The method according to claim 1 or 2, wherein identifying the face type of the face according to the first face key point comprises:~~

~~calculating a posture angle of the face using the first face key point; and~~

~~identifying the face type of the face based on the posture angle of the face.~~

34. The method according to claim 13, wherein the posture angle comprises a yaw angle, and identifying the face type of the face based on the posture angle of the face comprises:

determining an angle range to which the yaw angle belongs in a preset mapping table; and

setting a face type corresponding to the angle range as the face type of the face; and

wherein a mapping relationship between the angle range and the face type is recorded in the mapping table.

45. The method according to claim 13, wherein before identifying the face type of the face based on the posture angle of the face, the method further comprises:

performing angle correction on the face based on the posture angle.

56. The method according to claim 45, wherein the posture angle comprises a roll angle; and

performing the angle correction on the face based on the posture angle comprises:

selecting a face base point from the first face key point; and

maintaining a position of the face base point and adjusting the image data until the roll angle reaches a specified angle value.

~~7. The method according to any one of claims 1 to 6, wherein performing the position correction on the first face key point with reference to the face type comprises:~~

~~searching for a position correcting model corresponding to the face type;~~

~~extracting a second face image containing the face from the image data based on the first face key point; and~~

~~inputting the second face image into the position correcting model to perform position correction on the first face key point.~~

68. The method according to claim 17, wherein the first face key point comprises at least one of a mouth key point, an eyebrow key point and an eye key point; and

inputting the second face image into the position correcting model to perform the position correction on the first face key point comprises at least one of:

connecting mouth key points at corners of a mouth to acquire a first base line;

selecting a mouth base point on the first base line, and maintaining a position of the mouth base point and adjusting the mouth key point until the first base line is located in a designated first position;

connecting eyebrow key points at corners of eyebrows to acquire a second base line; selecting an eyebrow base point on the second base line, and maintaining a position of the eyebrow base point and adjusting the eyebrow key point until the second base line is located in a designated second position; and

connecting eye key points at corners of eyes to acquire a third base line; selecting an eye base point on the third base line, and maintaining a position of the eye base point and adjusting the eye key point until the third base line is located in a designated third position.

79. The method according to any one of claims 1 to 68, wherein detecting the second face key point of the face in the facial features image comprises:

searching for a facial features key point detecting model corresponding to the facial features image; and

inputting the facial features image into the facial features key point detecting model to obtain a second face key point of the face, ~~wherein the second face key point of the face is output by the facial features key point detecting model.~~

810. An apparatus for detecting a face key point, comprising:

an image data acquiring module configured to acquire image data containing a face;

a first face key point detecting module configured to detect a first face key point of the face in the image data;

a face type identifying module configured to identify a face type of the face according to the first face key point;

a position correcting module configured to perform position correction on the first face key point with reference to the face type;

a facial features image extracting module configured to extract a facial features image containing facial features from the image data based on the first face key point subjected to the position correction; and

a second face key point detecting module configured to detect a second face key point of the face in the facial features image,

wherein the face type identifying module is configured to: calculate a posture angle of the face using the first face key point; and

identify the face type of the face based on the posture angle of the face,
wherein the position correcting module is configured to:
search for a position correcting model corresponding to the face type;
extract a second face image containing the face from the image data based on the first
face key point; and
input the second face image into the position correcting model to perform position
correction on the first face key point.

944. A computer device, comprising a memory, a processor and a computer program stored on the memory and operable on the processor, wherein the processor, when executing the computer program, implements the method for detecting the face key point as defined in any one of claims 1 to 79.

1042. A computer-readable storage medium storing a computer program, wherein the computer program, when executed by a processor, causes the processor to perform the method for detecting the face key point as defined in any one of claims 1 to 79.