CLAIMS

1. A user interaction method applied to virtual object, characterized in that the method is applied to an interaction system comprising an image acquisition device and a screen, wherein the screen is configured to display a virtual object in an interaction interface, the image acquisition device is configured to collect real-time dynamic data within a first preset area in real time, and the method comprises:
obtaining real-time dynamic data comprising a user object collected by the image acquisition device, wherein the user object is a user who interacts with the virtual object within the first preset area;
determining a first relative position information of the user object relative to the image acquisition device based on a user position feature information and user size feature information of the user object in the real-time dynamic data;
determining a deviation position information of the user object relative to the virtual object based on the first relative position information and a second relative position information of the image acquisition device relative to the virtual object;
determining the first posture rotation coefficient and the second posture rotation coefficient of the virtual object based on the deviation position information; and
adjusting a target pose of the virtual object based on the first posture rotation coefficient and the second posture rotation coefficient.

2. The method according to claim 1, characterized in that determine the first relative position information of the user object relative to the image acquisition device based on the user position feature information and user size feature information of the user object in the real-time dynamic data, comprising:
determining a distance of the user object relative to the image acquisition device based on the user size feature information of the user object in the real-time dynamic data;
determining the first relative position information of the user object relative to the image acquisition device based on the distance of the user object relative to the image acquisition device and the user position feature information of the user object in the real-time dynamic data.

3. The method according to claim 1, characterized in that the deviation position information comprises a horizontal deviation relative angle and pitch deviation relative

angle of the user object relative to the virtual object; determining the first posture rotation coefficient and the second posture rotation coefficient of the virtual object based on the deviation position information, comprising:

determining the first posture rotation coefficient of the virtual object based on the horizontal deviation relative angle;

determining the second posture rotation coefficient of the virtual object based on the pitch deviation relative angle.

4. The method according to claim 1, characterized in that the user position feature information is determined as follows:

performing facial recognition detection on the real-time dynamic data, and determine an object tracking box comprising a facial recognition area of the user object in the real-time dynamic data;

determining the user position feature information based on the position of the object tracking box in the real-time dynamic data.

5. The method according to claim 1, characterized in that the user size feature information is determined as follows:

determining a first facial size information of the user object in the real-time dynamic data;

determining the user size feature information based on the first facial size information and an actual facial size information of the user object.

6. The method according to claim 1, characterized in that the method further comprises:

determining a body posture rotation coefficient of the virtual object based on the first posture rotation coefficient;

adjusting the target pose of the virtual object based on the first posture rotation coefficient and the second posture rotation coefficient, comprising:

adjusting the target pose of the virtual object based on the body posture rotation coefficient, the first posture rotation coefficient, and the second posture rotation coefficient.

7. The method according to claim 1, characterized in that the method further comprises:

perform facial recognition detection on video frame data collected by the image acquisition device;

if the video frame data comprises human face, the user corresponding to the face is determined as the user object, the video frame data comprising the user object is determined as the real-time dynamic data, and the virtual object is activated.

8. The method according to claim 7, characterized in that when the video frame data comprises human face, the virtual object is activated comprises:

determining a distance between the user object and the virtual object based on the user size feature information of the user object in the real-time dynamic data;

if the distance between the user object and the virtual object is within a preset range, activating the virtual object.

9. The method according to claim 1, characterized in that the interaction system further comprises an audio acquisition device and an audio playback device, and the method further comprises:

collecting a first interactive voice of the user object towards the virtual object through the audio acquisition device;

performing language recognition on the first interactive voice to determine a language of the first interactive voice;

generating a second interactive voice corresponding to the first interactive voice based on the language of the first interactive voice and semantics of the first interactive voice; the second interactive voice belongs to the same language as the first interactive voice;

playing the second interactive voice through the audio playback device.

10. The method according to claim 9, characterized in that the method further comprises:

based on the real-time dynamic data, performing gender detection on the user object to determine the gender feature information of the user object;

generating the second interactive voice corresponding to the first interactive voice based on the language of the first interactive voice and the semantics of the first interactive voice, comprising:

generating corresponding second interactive voice based on the gender feature information of the user object, the semantics of the first interactive voice, and the language of the first interactive voice.

11. The method according to claim 9, characterized in that the method further comprises:
obtaining user information collection; the user information collection comprises basic information corresponding to multiple identified users, and the identified users are users registered in advance for the interaction system;
based on the real-time dynamic data, identifying the user object through the user information collection, and determine the basic information of the user object;
generating the second interactive voice corresponding to the first interactive voice based on the language of the first interactive voice and the semantics of the first interactive voice, comprising:
generating the corresponding second interactive voice based on the basic information of the user object, the semantics of the first interactive voice, and the language of the first interactive voice.

12. An interactive system characterized in that comprises a processor, an image acquisition device connected to the processor, and a screen:
the screen being configured to display virtual object in an interactive interface;
the image acquisition device being configured to collect real-time dynamic data within the first preset area in real time;
the processor being configured to obtain real-time dynamic data comprising user object collected in real-time by the image acquisition device; the user object is a user who interacts with the virtual object within the first preset area; determine the first relative position information of the user object relative to the image acquisition device based on the user position feature information and user size feature information of the user object in the real-time dynamic data; determine the deviation position information of the user object relative to the virtual object based on the first relative position information and the second relative position information of the image acquisition device relative to the virtual object; determine the first posture rotation coefficient and the second posture rotation coefficient of the virtual object based on the deviation

position information; adjust the target pose of the virtual object based on the first posture rotation coefficient and the second posture rotation coefficient.

13. An electronic device, characterized in that comprising a processor, a memory, and a bus; wherein the memory is configured to store machine-readable instructions executable by the processor; when the electronic device is operating, the processor communicates with the memory via the bus; when the machine-readable instructions are executed by the processor, a user interaction method applied to virtual object which described in any one of claims 1 to 11 is performed.

14. A computer-readable storage medium, characterized in that the computer-readable storage medium stores a computer program, and when the computer program is run by a processor, it executes a user interaction method applied to virtual object described in any one of claims 1 to 11.

15. A computer program product, characterized in that comprises a computer program, and when the computer program is run by a processor, it executes a user interaction method applied to virtual object described in any one of claims 1 to 11.