What is claimed is:

1. A foot reflex zones identification method, comprises:

inputting a foot image into a multi-task deep learning network model, and obtaining foot part reflex zones and foot organ reflex zones; the foot part reflex zones include a head reflex zone, a neck reflex zone, a shoulder-back reflex zone, a chest reflex zone, an abdominal reflex zone, and a genital reflex zone;

wherein, the theoretical position relationship is that the foot organ reflex zones are sub-regions of each of the foot part reflex zones;

the foot organ reflex zones include a first group of organ reflex sub-zones corresponding to the head reflex zone, a second group of organ reflex sub-zones corresponding to the neck reflex zone, a third group of organ reflex sub-zones corresponding to the shoulder-back reflex zone, a fourth group of organ reflex sub-zones corresponding to the chest reflex zone, a fifth group of organ reflex sub-zones corresponding to the abdominal reflex zone, and a sixth group of organ reflex sub-zones corresponding to the genital reflex zone;

before judging whether the foot organ reflex zones and the foot part reflex zones satisfy the theoretical position relationship, the method further comprises:

obtaining a theoretical part orientation relationship and an actual part orientation relationship between the foot part reflex zones;

judging whether the actual part orientation relationship satisfies the theoretical part orientation relationship;

determining a first sub-zone orientation relationship of the first group of organ reflex sub-zones, a second sub-zone orientation relationship of the second group of organ reflex sub-zones, a

third sub-zone orientation relationship of the third group of organ reflex sub-zones, a fourth sub-zone orientation relationship of the fourth group of organ reflex sub-zones, a fifth sub-zone orientation relationship of the fifth group of organ reflex sub-zones, and a sixth sub-zone orientation relationship of the sixth group of organ reflex sub-zones;

judging whether the first sub-zone orientation relationship, the second sub-zone orientation relationship, the third sub-zone orientation relationship, the fourth sub-zone orientation relationship, the fifth sub-zone orientation relationship, and the sixth sub-zone orientation relationship satisfy a theoretical organ orientation relationship;

when the first sub-zone orientation relationship, the second sub-zone orientation relationship, the third sub-zone orientation relationship, the fourth sub-zone orientation relationship, the fifth sub-zone orientation relationship, and the sixth sub-zone orientation relationship satisfy the theoretical organ orientation relationship, judging whether the foot organ reflex zones and the foot part reflex zones satisfy the theoretical position relationship;

and when the actual part orientation relationship satisfies the theoretical part orientation relationship, judging whether the foot organ reflex zones and the foot part reflex zones satisfy the theoretical position relationship.

2. The foot reflex zones identification method of claim 1, wherein judging whether the foot organ reflex zones and the foot part reflex zones satisfy the theoretical position relationship, comprises:

determining a first region coordinate range of each of the foot part reflex zone in a preset coordinate system and a second region coordinate range of each of the foot organ reflex zone in the preset coordinate system;

determining an actual position relationship between the foot organ reflex zones and the foot part reflex zones based on the first region coordinate range and the second region coordinate range;

when the actual position relationship matches the theoretical position relationship, the foot organ reflex zones and the foot part reflex zones satisfy the theoretical position relationship.

3. The foot reflex zones identification method of claim 1, wherein judging whether the foot organ reflex zones and the foot part reflex zones satisfy the theoretical position relationship, comprises:

judging whether the first group of organ reflex sub-zones and the head reflex zone, the second group of organ reflex sub-zones and the neck reflex zone, the third group of organ reflex sub-zones and the shoulder-back reflex zone, the fourth group of organ reflex sub-zones and the chest reflex zone, the fifth group of organ reflex sub- zones and the abdominal reflex zone, and the sixth group of organ reflex sub-zones and the genital reflex zone satisfy the theoretical position relationship.

4. The foot reflex zones identification method of claim 3, wherein the first group of organ reflex sub-zones includes a brain reflex sub-zone, a nose reflex sub-zone, an oral cavity reflex sub-zone, an eye reflex sub-zone, an ear reflex sub-zone, and a frontal sinus reflex sub-zone; the second group of organ reflex sub-zones includes an esophagus-trachea reflex sub-zone, a neck reflex sub-zone, a thyroid reflex sub-zone, and a parathyroid reflex sub-zone; the third group of organ reflex sub-zones includes a trapezius muscle reflex sub-zone and a shoulder reflex sub-zone; the fourth group of organ reflex sub-zones includes a bronchus reflex sub-zone and a lung reflex sub-zone; the fifth group of organ reflex sub-zones includes a liver reflex sub-zone, a kidney reflex sub-zone, a stomach reflex sub-zone, a duodenum reflex sub-zone, a transverse colon reflex sub-zone, an ascending colon reflex sub-zone, a small intestine reflex sub-zone, and a bladder reflex sub-zone;

the sixth group of organ reflex sub-zones includes a pelvic region reflex sub-zone, a buttocks reflex sub-zone, and a gonad reflex sub-zone.

5. The foot reflex zones identification method of claim 1, wherein the multi-task deep learning network model includes a shared backbone sub-model, and a parallel organ reflex zone detection head and a part reflex zone detection head; Then, the step of inputting an image of a foot to be identified into the multi-task deep learning network model to obtain foot part reflex zones and foot organ reflex zones comprises:

obtaining shared image features based on the shared backbone sub-model, the shared backbone sub-model used for feature extraction of the foot image;

obtaining the foot organ reflex zones based on the organ reflex zone detection head, the organ reflex zone detection head used for key point detection of the shared image features;

obtaining the foot part reflex zones based on the part reflex zone detection head, the part reflex zone detection head used for semantic segmentationof the shared image features.

6. A foot reflex zones identification device, comprises:

foot reflex zone initial identification unit, configured to input a foot image into a multi-task deep learning network model to obtain foot part reflex zones and foot organ reflex zones; the foot part reflex zones include a head reflex zone, a neck reflex zone, a shoulder-back reflex zone, a chest reflex zone, an abdominal reflex zone, and a genital reflex zone;

foot organ reflex zone determination unit, configured to judge whether the foot organ reflex zones and the foot part reflex zones satisfy a theoretical position relationship, when they satisfy the relationship, determining the foot organ reflex zones as target foot organ reflex zones;

wherein, the theoretical position relationship is that the foot organ reflex zones are sub-

regions of each of the foot part reflex zones;

the foot organ reflex zones include a first group of organ reflex sub-zones corresponding to the head reflex zone, a second group of organ reflex sub-zones corresponding to the neck reflex zone, a third group of organ reflex sub-zones corresponding to the shoulder-back reflex zone, a fourth group of organ reflex sub-zones corresponding to the chest reflex zone, a fifth group of organ reflex sub-zones corresponding to the abdominal reflex zone, and a sixth group of organ reflex sub-zones corresponding to the genital reflex zone;

before judging whether the foot organ reflex zones and the foot part reflex zones satisfy the theoretical position relationship, the method further comprises:

obtaining a theoretical part orientation relationship and an actual part orientation relationship between the foot part reflex zones;

judging whether the actual part orientation relationship satisfies the theoretical part orientation relationship;

determining a first sub-zone orientation relationship of the first group of organ reflex sub-zones, a second sub-zone orientation relationship of the second group of organ reflex sub-zones, a third sub-zone orientation relationship of the third group of organ reflex sub-zones, a fourth sub-zone orientation relationship of the fourth group of organ reflex sub-zones, a fifth sub-zone orientation relationship of the fifth group of organ reflex sub-zones, and a sixth sub-zone orientation relationship of the sixth group of organ reflex sub-zones;

judging whether the first sub-zone orientation relationship, the second sub-zone orientation relationship, the third sub-zone orientation relationship, the fourth sub-zone orientation relationship, the fifth sub-zone orientation relationship, and the sixth sub-zone orientation

relationship satisfy a theoretical organ orientation relationship;

when the first sub-zone orientation relationship, the second sub-zone orientation relationship, the third sub-zone orientation relationship, the fourth sub-zone orientation relationship, the fifth sub-zone orientation relationship, and the sixth sub-zone orientation relationship satisfy the theoretical organ orientation relationship, judging whether the foot organ reflex zones and the foot part reflex zones satisfy the theoretical position relationship;

and when the actual part orientation relationship satisfies the theoretical part orientation relationship and the first sub-zone orientation relationship, the second sub-zone orientation relationship, the third sub-zone orientation relationship, the fourth sub-zone orientation relationship, the fifth sub-zone orientation relationship, and the sixth sub-zone orientation relationship satisfy the theoretical organ orientation relationship, the foot organ reflex zones and the foot part reflex zones satisfy the theoretical position relationship.

7. A rehabilitation robot, comprising memory and processor, among which,

the memory is used to store a program;

the processor coupled with the memory, is used to execute the program stored in the memory to implement the steps in the foot reflex zones identification method described in the claim 1.

8. A computer-readable storage medium is used to store a computer-readable program or instruction that, when executed by the processor, is capable of fulfilling the steps in the foot reflex zones identification method described in the claim 1.