CUHK Jockey Club
HOPE 4 Care Programme

Augmented Reality Stroke Rehabilitation Training Systems for Exercise Programme

The AR Rehab System is an intelligent platform for real-time monitoring of the body movements of patients during an exercise programme. Using a small depth camera and infra-red motion capture system, it can capture useful biomechanical data accurately, including:

- Location of body centre of mass
- Range of motion in the body joint angles
- Body posture coordinate and stability

Concept

Good for Patients:

- Patients can follow the exercise programmes on the TV screen by themselves, with training schedules and routines customized to individual patients
- Instant augmented reality (AR) visual and audio feedback or alarms to assist the patients completing the exercise tasks in correct postures

Good for Therapists:

- Save manpower without having to supervise each exercise session and yet can ensure that the patients are exercising in the correct and appropriate way
- Patients' biomechanical data in each training session can be stored in the cloud database for therapists to track patients' therapeutic progress conveniently
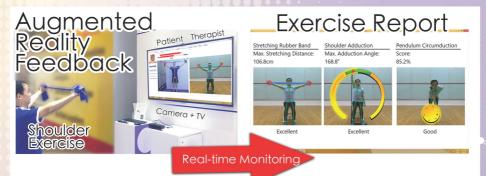
The Hong Kong Jockey Club Charities Trust has supported CUHK to launch a three-year project "CUHK Jockey Club HOPE 4 Care Programme" to implement four evidence-based advanced rehabilitation technologies in 40 local elderly day care centres and rehabilitation centres, to benefit the community.

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