Title of Invention

PI： Prof. Wei-Li Hsu

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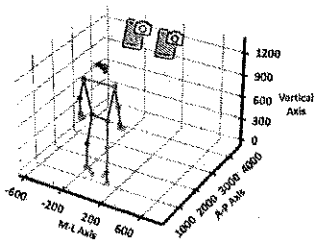

Experience:

The research field of Wei-Li Hsu is the development of rehabilitation training and assistive devices after surgery of spondylosis, providing evidence of the theoretical basis and clinical efficacy of rehabilitation.

Department website:

https://www.mc.ntu.edu.tw/ntupt/Vcard.action?q_type=-1&q_itemCode=114)

Market Needs:

With the global aging population and the rising prevalence of chronic diseases, the demand for medical imaging technology has rapidly increased, driving the continuous expansion of the medical imaging market. In recent years, the COVID-19 pandemic has led patients to avoid visiting medical facilities, making telemedicine a new trend and increasing the demand for online medical imaging assessments. This system provides precise image analysis, supports personalized diagnosis and evaluation, and enhances diagnostic efficiency and accuracy. Unfortunately, the implementation of this system in medical institutions and homes remains not widespread.

Our Technology:

We are developing a markerless motion capture system and optimizing the environment to evaluate patient movement data with fewer environmental limitations. This technology has been tested on healthy individuals and patients with degenerative lumbar spine conditions. The results have been positive regarding reliability, validity, and clinical movement data, allowing for precise measurement of movements.

Strength:

The medical imaging recognition assessment system utilizes deep learning and artificial intelligence techniques to identify abnormal movement automatically features within images, enhancing diagnostic accuracy and efficiency. Additionally, the system enables quantification of movements before and after medical interventions, providing precise data analysis to support patients and medical professionals. Through quantified motion values, patients can intuitively grasp treatment effectiveness, while medical professionals can make precise diagnoses and treatment adjustments based on this data, ultimately enhancing the overall quality and effectiveness of healthcare services. This technology will be crucial in clinical diagnosis, treatment assessment, and telemedicine applications.

Competing Products: Kinect

Intellectual Properties: (1)This invention currently has no other patent applications

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