Analyzing and Measuring Human Joints Movements using a Computer Vision System

Abstract

Range and patterns of movement estimation is a crucial concern for clinicians in the diagnostic and functional assessment of patients with musculoskeletal disorder. To obtain a record of the degree of permanent impairment of an individual, Range-Of-Motion (ROM) measures are used. Currently, clinicians use all or any of numerous assessment instruments, a universal goniometer, an inclinometer or a tape measure to make these estimations. However, such tools appear to have major drawbacks in measuring ROM. Markerless vision-based human motion analysis can provide an inexpensive, non-obtrusive solution for range of joint motion measurement. This paper outlines the problem of measuring human joints movements using a computer vision system that supports the physiotherapist as a diagnosis tool to aid rehabilitation of joint movement disorders and its treatment plan.

References

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Analyzing and Measuring Human Joints Movements using a Computer Vision System

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Index Terms

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