

A framework for the development of measurement and quality assurance in software-based medical rehabilitation systems

Abstract

The field of computer and robot-assisted rehabilitation system is rooted in the principle that software must be largely errorless, user-friendly, robust, accurate with respect to data, respond in a timely manner, and yet inexpensive, which lead to enhanced patient outcomes. In this digitized age, computerized and robotic rehabilitation systems act as a vital support for disabled individuals. Till today, different types of software for medical rehabilitation systems have been developed and applied to the rehabilitation process successfully, but improvement in quality and measurement of rehabilitation software is continuously in progress. Some ways of the software production have been established but further measurement process has always been a necessity. This paper presents the framework and recommends establishment of software quality measurement in computer- and robot-assisted automated medical rehabilitation system. Also, a brief discussion of rehabilitation technique and their software quality is also included. Lastly, we include its importance in medical technology and quality. To satisfy the end user, vendor satisfaction, software measurement and quality assurance are important components in software-based medical rehabilitation systems.

Keywords — Measurement, medical, quality, rehabilitation, robot, software