

Using a Mobile Phone as a Diagnostic Tool for Clinical Rehabilitation

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Technology description

Short Description

A mobile application to detect movement disorders

Abstract

Northwestern researchers have developed a new mobile phone application that utilizes sensors which are already built into mobile phones. Their technology can help doctors readily diagnose a wide range of movement diseases, such as tremor, sway, asymmetric gait, and freezing. For example, they have already written an application that can reveal the percentage of time a patient is walking, running, sitting, or lying. The algorithm is based upon data from an acceleration sensor that is primarily meant for detecting the orientation of the phone. Likewise, other algorithms are also being created to help detect abnormal movement using these built-in sensors, including but not limited to acceleration and touch.

Application area

Diagnosis of movement-related diseases

Advantages

Inexpensive – Uses existing components built into a mobile phone

Convenient - Applicable to wide range of movement diseases

Institution

[Northwestern University](#)

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