ABSTRACT

The wheelchair is one of the most common assistive technologies for people with motor impairment, due to its environmentally friendly features in terms of mobility and comfort. However, the operational method for the conventional wheelchair is still inconvenience for people with finger problems. These inputs will be used to control the wheel chair's movement. The wheel chair will move forward, left, right, or backward depending on these inputs. The user is able to move independently without the assistance of others thanks to this system. Additionally, an obstacle detection system was included to guarantee user safety. The whole scheme consists of a sensor devices and a fog server. If an obstacle is detected, LCD can provide an indication. The first is used to get uninterrupted vital signs and the additional uses tested signs to figure out the temperature level and is embedded in a system to make a locater scheme that is fully integrated. The results showed that the participants comfortably controlled the developed wheelchair system to the goal without any collision. Results from experiments indicate that the proposed approach has high accuracy and the potential to solve the problem related to finger dependencies and hand fatigue.