Title (tentative): A motion-based touchless application for children/adult with neurological disease

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Description

Motivation and application domain
Exploring motion-based touchless applications for children/adult with neurological disease, investigate their design issue and the benefits they can bring to rehabilitation program with potential remote control. Collaboration with hospital clinical team and users observation opportunity.

General objectives and main activities
Our research want to sheds a light on further opportunities to usable and ergonomic therapeutic experiences by custome-made exergame. With our findings we want to focus on the potential of motion-based touchless software in technology-enhanced interventions by the realization of tailor-made software, design guidelines that distill clinical and therapeutic experience to examining the correlation between dedicated software use and usual rehabilitation program.

Training Objectives (technical/analytical tools, experimental methodologies)
Engineering tasks related to this study will include:
Development of the software for real time control
Kinematic data collection

Research skills such as methods design, data analysis, data interpretation, signal processing and machine learning methods will also be learned and exercised during this project.

Place(s) where the thesis work will be carried out: DIBRIS, IIT(erzelli) & Collaboration with the hospital clinical team of dr. L. Bartoli (Asl4, Chivari)

Additional information

Maximum number of students: 1