

LECI – Proposta de Projeto Eng.a de Computadores e Informática

PROJECT TITLE

Gym: Smart Gym at Home

KEYWORDS

Smart Homes, Active ageing, Prevention, multimodal interaction.

WORK COORDINATION

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CONTEXT AND MOTIVATION

The population in many countries, including Portugal, is ageing. Also, there is a decrease of human resources in healthcare.

The traditional approaches to handle healthcare and assisting older adults are in their limits and new approaches are needed. It is essential investing in prevention, creating conditions for older adults to stay longer in their homes and remain active. Technology mediated health monitoring and remote solutions for caregivers and health professionals support have great potential. To serve as a proof-of-concept for this new paradigm, in partnership with OLI company, Rovisco Pais Rehabilitation Center, and University are implementing novel solutions for an older adult smart home. One of the solutions conceptualized is an exercise space for the house supporting tutoring, exercise monitoring and creation of virtual collaborative gym.

PROPOSED OBJECTIVES

This proposal aims at developing a prototype of the house exercises zone - a kind of Home Gym - connected to other Homes.

The initial requirements for the system/solution are:

- Provide information regarding the exercise plan and exercises to the user.
- Interaction at distance to control the system (using speech and gestures).
- Interconnection with other similar systems, including video transmission.
- Initial monitoring capabilities of exercises execution.
- Robust enough to be deployed in real house (in advanced stages of construction).

RELATION WITH PROJECTS

This proposal is related to project “Casa da Saúde”, funded in its initial phase (2022) by OLI.