Artificial Intelligence for Better Living

HERO s.r.l. is an innovative start-up, focused on robotics, Artificial Intelligence (AI) and human-machine interaction, with Healthcare as first field of application. Founded in the 2016 Hero has developed the 1st integrated robot-software solution based on a therapeutic behavioural treatment protocol individualized to help children affected by Autism Spectrum Disorder (ASD). Children with ASD respond in a socially active manner to all that is technological, because they have a mathematical and little social mind. Hero received 2 seal of excellence in 2017 and 2019, in the area of SME Instrument-"Accelerating market introduction of ICT solutions for Health, Well-Being and Ageing Well".

HERO offers a therapeutic behavioural treatment protocol applied to Socially Assistive Robots to promote a gradual improvement in the overall levels of development in autistic children: verbal, social, and adaptive skills. The robots allow the patient to perform exercises belonging to standard protocol families, ABA and ESDM or exercises defined by the clinical staff. The software also includes specific computer vision components to store metrics and objective indices during the therapy sessions, recognizing the face of the child and the 7 universal facial expressions. This helps researchers, therapists and, above all, family members to better understand the mood of the child and theiremotions, during interaction with the Robots.

Hero has also developed an innovative solution, Hero Health Monitoring, for the contactless detection of physiological and emotional parameters.Through simple video devices (cameras, tablets and / or smartphones), enhanced with the HHM computer vision software, it is possible to collect information and data with respect to:

- Heart and respiration rate,
- Blood oxygenation level,
- Body temperature (adding a thermoscanner),
- Posture and movements, to detect any falls,
- Emotional states,
- Social distancing measures (people counting, interpersonal distance and mask and gloves detection).

HHM can be implemented in Hospital and residential structures or used to support home care.