

Artificial Intelligence for Silver Economy

Special session organizers

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Scope of the session

Artificial Intelligence (AI) usage in healthcare and especially for elderly care is rising. An important goal of medicine is to develop quantitative models for patients that can be used to predict health status, as well as to help prevent disease or disability. Regarding elderly care, the ultimate goal consists in preventing dependency and delay hospitalization for elderly persons living at home. In this context, many sources of health data can be used, such as electronic health records (EHRs), medico-administrative data, environmental data from smart homes. Recent studies have shown that secondary use of EHRs has enabled data-driven prediction of drug effects and interactions, identification certain pathologies, discovery of comorbidity clusters and clinical pathway, and identification of crucial medical examinations for systematic screening. In particular, such data can be used to predict frailty development or accidents (such as falls) for elderly persons and maximize the number of years in good health. Although predictive models and tools based on machine learning techniques are widely used in industrial applications for elderly people, there is a lack of scientific evidence assessing the performance of such devices.

Health data is challenging to represent and model due to its high dimensionality, noise, heterogeneity, sparse-ness, incompleteness, random errors, and systematic biases. These challenges have made it difficult for machine learning methods to identify patterns that produce predictive clinical models for real-world applications.

This special session aims at identifying crucial research progress in artificial intelligence applied to the silver economy research area. Scientists, researchers and engineers are invited to submit their current research related with artificial intelligence: recent developments in theory, computational studies, optimization, data mining, machine learning or combination of those, dedicated to improve the quality of life of elderly people.

Topics of interest include, but are not limited to:

- Modeling of health data and medical decision for elderly persons
- Optimization of machine learning approaches
- Smart homes data analysis
- Knowledge acquisition in health-care
- Medical workflow analysis
- Chronic disease management
- Clinical decision support systems

Submission procedure

Contributed paper submission deadline (through the conference submission site): March 15th 2021

Submission instructions: <https://case2021.sciencesconf.org/>