Accepted Manuscript

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PII: S0169-023X(18)30067-3

DOI: 10.1016/j.datak.2018.02.003

Reference: DATAK 1633

To appear in: *Data & Knowledge Engineering*

Please cite this article as: I.-Y. Song, M. Song, T. Timakum, S.-R. Ryu, H. Lee, The landscape of smart aging: Topics, applications, and agenda, *Data & Knowledge Engineering* (2018), doi: 10.1016/j.datak.2018.02.003.

The Landscape of Smart Aging: Topics, Applications, and Agenda

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Abstract

Smart aging is an emerging research topic that has a profound impact on society and well-being of aging population. To the best of our knowledge, there has been no systematic analysis of grasping what research has been conducted on smart aging. Thus, there is no discussion of major issues and future directions of smart aging. In this paper, we provide an overview of smart aging in three ways: 1) to synthesize the components of smart aging based on the comprehensive literature review and 2) to examine the range of topics extracted from 3,760 web pages and 3) to analyze the research activities on smart aging by conducting a content analysis of 4,500 web pages of the NIH funded organizations' websites related to smart aging. The results of the comprehensive literature review indicate that the discussions on smart aging in the scientific publications are by and large classified into the following three directions: Technologies, Aging Medical Care, and Behavior and Social. In addition, the major topics from search engine datasets, which echoes more general discussions from various different parties, are related to entertainment program and social media, along with medical science and innovation technologies, whereas the research activities of NIH funded organizations focused on cross-disciplinary research in Behavioral and Social science, and Medical Care.

Keywords: Smart aging; Aged; Well-being; Self-care; Information Communication Technology

1. Introduction

With rapidly increasing world's population with age, people over 60 years old are the world's sharpest growing population group that affects our economies, social, healthcare, and living arrangements [1]. This demographic change is the serious challenge not only for healthcare but also for the society to sustain aging populations.

While the provision of the resources for people is to be preceded to satisfy their daily lives, it is more essential to determine what environments are to be provided for aging populations to be

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