The Impact of AI in Smart Home and Smart Care

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Abstract

Smart home and artificial intelligence – AI- technologies are in a developing process these days. The main declared purpose, target the quality of living for owners. There are some studies that discuss the applications of artificial intelligence in smart homes, and a fewer that discuss the application in smart care, but a bunch of publications fully considered the integration of literature. In this presentation, we aim to answer the debated questions of the day: "what is the trend, and which are the possibilities of smart home and smart care technology".

AI entered in smart homes will stay long time. Smart homes are one of the greatest innovations that were made for a convenient and comfortable living. Artificial intelligence rises the experience of smart homes to a whole new level. At first, AI was higly costly, difficult, and rare to find, but technological development has made it more accessible and of course affordable to many people and organizations. Smart homeowners can access many benefits by making their homes AI-enabled. AI is now days compatible with smart devices that can be found in homes, enhancing their efficacy by recognizing voice commands and adding convenience to everyday routines and tasks. AI reduces human involvement in implementing various tasks, giving the user more comfort and time to concentrate on other things.

Smart home technology has its applications in household appliances, home safety & security, lighting, and entertainment. Key industries have started integrating artificial intelligence with smart devices in order to enable connectivity among these devices.

AI has the ability to interconnect multiple IoT devices. Consider this in addition with superior processing and learning abilities, and we have the possibilities to use them to pre-empt human

behavior. AI-powered smart home devices will interact with each other and acquire new data that assists in learning human habits.

Furthermore, the rise of digital assistants which are the visible part of AI, like Alexa, Siri, Google Assistant, and Bixby bring the power of AI in the hand of human user. Apart from its application in home security systems, AI is utilized to control smart devices, advanced home security systems and many other prevention systems that can also be controlled through voice commands. Researchers are focused on bringing in innovation in the field of voice recognition technology that will further add value to voice control devices. Latest advancements in home automation systems (and not only) can enable owners to gain access to hands-free channel surfing and control Bluetooth speakers. The emergence of the voice assistant feature also raises security concerns, as some researchers have managed to hack smart devices through the very their own advantages.

Short CV

Dan Rosenberg is an associate professor at Transilvania University of Brasov. He was born in 1973, graduate in Electrical Engineering in 1997 and, PhD in Automation in 2009. Is Member of SRAIT (Romanian Society for Automation and Information Technology), and IEEE.

His field of interest is focused on integrating intelligence in all surrounding objects in order to control them in the new paradigm of cloud-based services. He is working on design, and execution of software engineering for the web, mobile, apps, social, voice, IoT, applications along with Machine learning and AI.