

## 3<sup>rd</sup> Indo-Global Summit & Expo on **Healthcare**

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### **Ambient assisted living (AAL) setup to determine the wellness of a person living alone in their own home**

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An efficient electronic real time data processing system to recognize the behavior of an elderly is presented. The ability to determine the wellness of an elderly person living alone in their own home using a robust, flexible and data driven artificially intelligent system has been revealed. A framework integrating temporal and spatial contextual information for determining the wellness of an elderly person has been presented. A novel behavior detection process involved in the human behavior detection based on the observed sensor data in performing essential daily activities has been designed and developed. The model can update the behavior knowledge base and simultaneously execute the tasks to explore the intricacies of the generated behavior pattern. An initial decline or change in regular daily activities can suggest changes to the health and functional abilities of the elderly person. The developed system is used to forecast the behavior and quantitative wellness of the elderly by monitoring the daily usages of household appliances using smart sensors. Wellness determination models are tested at various elderly houses and the experimental results related to the identification of daily activities and wellness determination is encouraging. The wellness models are updated based on the time series analysis formulations. The integrated smart sensing system is capable of detecting human emotion and behavior recognition based on the daily functional abilities simultaneously. The electronic data processing system can incorporate the Internet of Things framework for sensing different devices, understand and act according to the requirements of smart home environment.

#### **Biography**

Nagender Kumar Suryadevara has completed his PhD from Massey University, New Zealand. He has authored/co-authored more than 40 articles in reputed international journals, conferences and book chapters. He is the recipient of Massey University Doctoral for three years. He has demonstrated consistent success as an Educator and Administrator at the graduate and post graduate education levels during his teaching career. He has extensive teaching experience working across India, Ethiopia, Oman and New Zealand countries. He has received best student research paper award Health Informatics-New Zealand (HiNZ) for the year 2014.

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