Assistive Robotics and Technology

Krishna Sindhuja Kalusani

USC ID: T25568677

The main moto of advent of technology is to assistance and support the facilities. Starting from a fountain pen to the mobile phone, every invention and improvement was to support human race with different activities. Technology is all about enhancements to life style. The smart homes are an evolutionary idea for the same. The technology development that helps older people to perform the daily actions is nothing but the idea of smart homes. But to design an assistance, let's say an assistive robot the scientist should be fully aware of the purpose and conditions in which the robot is used. For this one should know the difference between a bad design and a good design. The challenges that a person might face during aging in place are maintaining home, stress, loneliness etc. The marker of this change could be physical, perpetual and cognitive.

Let us consider the assistive robots for older adults and children. Few examples for the assistive robots are mobile manipulators (William Garage PR2), Telepresence (for interactions and other use cases), for rural educational services etc. Studies have shown that the older adults or the children with the assistive robots are more conscious to the situations and needed time to get acquainted with the robot. Human robot interactions is a young and multi-disciplinary which needs theory. Customising a robot behaviour and collaborations are to be considered with the older adults and children. Few factors that are to be taken into consideration for the robot to be an assistive robot in a smart home are:

- The range & motion payload
- Size of the robot
- Conditional use
- Control methods