**Senior Social Network for Improving Quality of Life**

As previously mentioned, social networks and social media are now an intrinsic part of our lives. People are always connected, sharing information, exchanging experiences and emotional feedback as we live in a digital era. Many discussions are being held over the benefits and other issues concerning this new digital life. In fact, these kinds of solutions may play an extremely important role in combating the loneliness and emptiness manifested by the majority of the senior population. In order to do so, some characteristics linked to social networks and social media [26] must be taken into account. We further address some characteristics that we consider fundamental, especially due to the target population. Afterwards, we will present the architecture of the proposed solution, which followed the proposed characteristics.

**Features:**

In order to develop a social network for improving the quality of life for seniors, we need to attend certain specifications. We need to keep in mind that seniors wish to foster relationships with distant family members and friends. They also want to keep an active role in society and cherish entertainment activities. Furthermore, they usually manifest some difficulties in dealing with new technologies, and some of them are even illiterate. Age-related physical and cognitive decline is also a factor to bear in mind, as we want to promote healthy aging.

For that purpose we propose the following characteristics:

* Simple interface: common minimalistic and intuitive social user interfaces must be developed. This feature is even more relevant when the senior population is the target and natural physical and cognitive age-related changes must be taken into account. The main drive is to “keep it simple.” Therefore, we have done some previous work regarding the existing barriers between the elderly and their use of ICT in order to underscore all the benefits provided from mobile sensing and social computing. A survey on guidelines, standards, and advice regarding usability and accessibility issues when developing solutions for elderly people was carried out in [27].
* Extended interface: smartphones, tablets, and wearable technologies are contributing towards a more dynamic and ingrained interaction in our daily routines. Social networks are not constrained to traditional inputs, where some technological skills were previously needed. These new components appear as a natural extension of ourselves, spreading our ability to relate with the world and others. Collecting and sharing information are becoming more inherent to anyone, even those with little to no technological skills and digital expertise, anytime, anywhere. Consequently, the interaction of the senior population with social networks is growing into easier-to-use and more enriching forms.
* Ease of feeding and finding: data must be easy to upload, share, and find. Most of our contents are unstructured and not just based on text, but also images, videos, and emotional reactions. So, this social participation needs to be simple to provide. Also due to this miscellaneous ecosystem, the contents must be easy to search and access. Again this characteristic is fundamental concerning the elderly, who are usually technologically illiterate and are less agile within digital barriers.
* Being user-based: users fill the social network with conversations and content, in a collaborative and interactive way. Again, in a social network tailored for the elderly, this kind of interaction is very important as feedback stimulates the continuity of discussions and shares.
* User-generated content creation and exchange: social media enriches social networks. This characteristic is vital whenever the elderly are considered, as they have so many life experiences and so much wisdom to share [28]. These may include (i) life testimonies, such as the experience of going through and overcoming an illness, which can help others who are going through the same situation, especially giving hope and motivation; (ii) storytelling to their grandchildren, consolidating the ties that sometimes geographical distance keeps apart; (iii) passing down traditional know-how and craft to future generations, such as recipes, proverbs, or folklore, preventing the loss of information; (iv) professional tacit knowledge shared with former but still active co-workers, ensuring organizational proficiency.
* Being interactive and entertaining: modern social networks have an increasing number of applications for games and other entertainment. The elderly can significantly benefit from this characteristic as they are likely to have more time to spend with serious games applications that can, for instance, stimulate their memory and cognitive functions. Additionally, games with multiple players lead them to interact with other people.
* Emotion over content: sharing life experiences not only with friends but also with other persons who are passing through the same experience can provide extreme emotional comfort. Moreover, having a network of people to contact at any time provides a reassurance that we are never alone.
* Relationships: in the course of our lives we cross paths with many people with whom it is nearly impossible to keep in touch. The appearance of social networks has brought the opportunity to easily find old acquaintances and even some “lost” family members. Seniors, above other people, enjoy hearing from friends and family with whom they once interacted and resuming some relationships.
* Being community-driven: the fact that several people share the same interests, hobbies, and tastes contributes towards the increasingly numerous groups of people forming subnetworks. It is profitable to follow and interact with people who have similar background with regard to interpersonal growth.
* In-person event promoter: many social networks facilitate the creation of events, including hiking or other outdoor activities such as visiting tourist sites. Whenever the elderly are home alone, they may have tendency to settle and be isolated. Social networks can provide groups to promote activities involving physical exercise and tours, which is very important in developing healthy routines.

**Our aim is for these proposed characteristics to develop positive feelings in the elderly. The communication underlying a social network should enhance the**

* Feeling of belonging, the social aspect of communication, and contact with remaining family members and friends face to face. Although not replacing face-to-face interactions, it will help fight the loneliness that may occur when physical presence is not possible. Thereby existing relationships will be fortified and new ones will emerge, increasing the
* Feeling of companionship and connectivity. Additionally, we want to increase mental health and memory stimulation among senior citizens by holding the concept of network-based gaming applications, such as card games available for multiple players, and other more serious games, thus developing the
* Feeling of well-being and interaction. As for the construction and interchange of media content, we want to improve the
* Feeling of meaningfulness, being valuable to society by sharing knowledge, and leaving a mark. The experience exchange and support will also intensify the
* Feeling of emotional comfort.