POSTER ABSTRACT

Big Data and IoT system using a serverless architecture for monitoring and intervention of loneliness in the elderly.

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An accelerated growth in the life expectancy of the elderly is being caused by medical advancements in recent decades and the decline in birth rates. Therefore, comprehensive care of the elderly represents a major issue. In addition, loneliness and depression have become major emotional disorders of high incidence in this sector of the population, causing difficulty in maintaining an independent life. Thus, this area of attention deserves great attention and intervention. Hence, it is very important the creation of technological tools that provide solutions to the aforementioned problem. This study proposes an IoT system using a serverless architecture, suitable to provide a remote service at home. The system gathers data about the home environment and the residents. The pilot system presents the monitoring stage, which is able to collect data from 6 sensors: presence, temperature, humidity, accelerometer, air quality, and the Fitbit Charge 5. The data is communicated and stored in AWS microservices. In the short term, the objective is to collect data, monitor, and predict patterns using artificial intelligence of variables captured by the system from real users. Additionally, the system will be able to generate alarms when the person is at risk of loneliness or depression to contribute to a rapid intervention. This system intends to provide a personalized solution, with easy implementation and usability, in order to reduce the rates of depression and loneliness in elderly people.