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Internet of Things (IoT) in monitoring physiological parameters

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With the rapid development of the world economy and the significant improvement in living standards, people's average life expectancy has increased, which has led to substantial changes in the types of diseases encountered in the daily population. These diseases are found in both older and younger people. At the same time with the development of informatics in the field of health, the clinical data of the patients can be registered in different servers that are found under the name of Cloud. They allow the visualization and interpretation of recordings from subjects using a device connected to these servers, an important role for both medical staff because it can easily keep track of certain patients with chronic diseases. The system uses an Arduino development platform to purchase data from attached sensors. The ECG module is based on an instrumentation amplifier with several levels of filtering, so as to acquire a series of signals corresponding to a physiological chart in a single channel, which are sent to an Atmega microcontroller. The pulse detection part was performed using a pulse oximetry module and determines the levels of oxygen saturation in the blood. The advantages of this system consist in: efficient, fast acquisition and storage, real-time remote monitoring, user-friendly interface, accessibility for patients and caregivers.