ANNOTATION

This thesis is devoted to the development of a software and hardware complex of a smart home.

The work demonstrates and explains the development and implementation of a digitally controlled interface between various sensors and the Arduino microprocessor. This system can make connections over a network and also send and receive data to the monitoring system. In addition, it has the ability to remotely control the system using the web interface.

The issue of classifying human activity using artificial neural networks has also been investigated. Ten different standard machine learning algorithms and two deep learning models (LSTM, CNN) were trained and tested.