

ABSTRACT

Internet of Things (IoT) is a system of interrelated computing devices where all the things, including every physical object, can be connected - making those objects intelligent, programmable and capable of interacting with humans. As more and more data are generated each day, IoT and its potential to transform how we communicate with machines and each other can change the world. The user operates the smart home devices year in year out, have produced mass operation data, but these data have not been utilized well in the past. This project focuses on the development of home automation system based on internet of things which allows the user to automate all the devices and appliances of home and merge them to provide seamless control over every side of their home. The data can be used to predict the user's behavior custom with the development of a machine learning algorithm, and then the prediction results can be employed to enhance the intelligence of a smart home system. The designed system not only gives the sensor data but also process it according to the requirement, for example switching on the light when it gets dark and it allows the user to control the household devices from anywhere. The cloud is used to send the sensor data through wi-fi module and then a decision tree is implemented which decides the output of the electronic devices also, it is used to achieve the power control and local data exchanging which provide the user interface, store all the information corresponding to the specific house, and query the function information of an individual home appliance.