

# Home Automation Using Multinode Cooperative Network

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**Abstract:** Home monitoring can be implemented in a low-cost manner using this proposed project. The existing system involves high-cost equipment which cannot be utilized by a normal person. In the proposed model the overall design of home monitoring uses the multinode co-operative network. It mainly focuses on the development of the home monitoring system which can be implemented using NodeMCU. The highlight of the project is to use the NodeMCU embedded with Wi-Fi technology which enables the transmission of the sensed data to the cloud. The Proposed model will monitor the working status of various equipment in the home. Based on the data sensed from the equipment the information is shared in a cooperative manner with the remote monitoring unit. The Amplify and Forward cooperative protocol is used to transmit the data to the destination. The main advantage of the cooperative network is to enhance the signal reception quality and to improve the monitoring of the status round the clock. A popular open-source platform to execute the process of transmission, processing, and receiving data without losing the intensity. We are going to use multiple nodes to decrease the fault while working with them. These node MCUs are used for many projects as it is very cheap. It also has integrated support for the Wi-Fi network. Its compact size is an added advantage. It has low energy consumption property and reliable secure cloud storage. They have a user-friendly programming environment and a scripting language that is easy to learn. These are mainly used in IoT home automation, security alarms, incubators, controller, Internet smoke alarms, serial port monitors, and VR trackers.

**Keywords:** NodeMCU, co-operative network, amplify and forward, IoT

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