**Literature Review**

1. **Low-Cost Home Automation Using Arduino and Modbus Protocol**

In this paper, a cost effective home automation system is proposed. This system is based on Arduino microcontroller which works on a Modbus protocol. Modbus protocol is a protocol for the communication of the PLCs. This method is used to transmit the information to electronic devices. All the electrical devices are controlled using this method at lower cost than other methods.

[Hassanpour, V., Rajabi, S., Shayan, Z., Hafezi, Z., & Arefi, M. M. (2017, November). Low-cost home automation using Arduino and Modbus protocol. In *2017 5th International Conference on Control, Instrumentation, and Automation (ICCIA)* (pp. 284-289). IEEE.]

1. **Home Security and Energy Efficient Home Automation System Using Arduino**

This paper represents an efficient energy management system as well as surveillance system for houses. In addition, it also provides the feature to cater with the disaster like fire. Arduino UNO microcontroller is used to build the system and embedded C programming language is used for the coding of features.

[Nayyar, C., Valarmathi, B., & Santhi, K. (2017, April). Home security and energy efficient home automation system using arduino. In *2017 International Conference on Communication and Signal Processing (ICCSP)* (pp. 1217-1221). IEEE.]

1. **Designing and Implementation of Home Automation System Based on Remote Sensing Technique with Arduino Uno Microcontroller**

As the name suggest, this paper deals with the design and implementation of home automation using remote sensing technique. Arduino UNO is used as a main controller in the system. There are two operational modes proposed in the paper such as Manual and Automatic. The GUI for monitoring and control is designed in MATLAB.

[Sulayman, I. I. A., Almalki, S. H., Soliman, M. S., & Dwairi, M. O. (2017, May). Designing and implementation of home automation system based on remote sensing technique with Arduino Uno microcontroller. In *2017 9th IEEE-GCC Conference and Exhibition (GCCCE)* (pp. 1-9). IEEE.]

1. **Smart Home Monitoring System Using ESP32 Microcontrollers**

The given smart home monitoring system in the paper is designed for monitoring and security purpose of the home. It secures the home by detecting the intruder and triggering the alarm system of the house. This system works based on IoT modules as well as uses the ESP32 microcontroller as a main controller.

[Babiuch, M., & Postulka, J. (2020). Smart Home Monitoring System Using ESP32 Microcontrollers. In *Internet of Things*. IntechOpen.]