

Advanced Home automation with Webcam Based Occupancy Sensors and AISAA Module

- *'Bring Home to your hands'*

Home automation is a well known term in today's world, but the extent of automation is debatable. The people of this world are in constant effort bring new technology to their fingertips, change and modify the existing technology to meet the demands and to salvage our thirst for exuberant luxury.

At the outset, Home Automation is loosely defined as the process of being able to control your home, to be precise, control is imparted particularly and only to the appliances present in a typical house. Home automation has been previously tested and proved with technologies pertaining to Radio Frequency, Infra Red etc. The aforementioned technology is only used for sending a signal, to be precise, an active control signal to the control unit. This technology has stood the test of time and it's time for the technology to rest as new technology is born every minute.

Technology is analogous to time and adhere very closely to Einstein's Special Theory of Relativity, it never stops, never measured accurately. With the advent of phones to this world, it affected the life of millions by changing their way of living. Time progressed so did technology, giving rise to a revolutionary change in the world of phones that we colloquially call "Smart Phones".

Home automation by a range bounded technology is great. But by range unbounded technology is simply marvelous. Occupancy sensors detect the presence of the subject of interest or the absence of the same. This is of particular interest to us so as to control the power supply to the area, thereby aiding the concept of "Save Energy". Webcam sensors have numerous advantages to overshadow slight disadvantages. Advantages include multitasking skills to perform roles of CCTV camera, Intruder detectors, Remote Video Access.

The advanced micro controller units form the heart of the control unit. This control unit provides output to electric and power electronics circuitry to provide a wide range of control options of the electrical appliance which include Intensity/brightness, Speed Control and ON-OFF control.

To provide complete control of the appliances remotely from any part of this world, we shift focus away from RF, IR etc and a remote, to a more advanced and stable technology called the Internet and specifically Network Programming. The Smartphone becomes the remote. An application installed on the phone is capable to communicate to the control unit by network through which control signals are transferred and processed at the control unit. Thus by using Internet as the medium of communication and a Smartphone a remote, the possibilities, advantages and abilities are numerous and unlimited. Concepts of Intelligence, Self Learning and interaction such as reminders, preferences, automatic control, disaster prevention, mitigation measures will be bundled through the Intelligence module of the project called Adaptive Intelligence with Sustained Artificial Acceptance (AISAA).

This project changes the way we control. This project changes the way we live.

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