

# WORLD IOT DAY IDEA SUBMISSION

## Object detection based electrical appliances controlling system

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**Area:** Internet of things – Energy conservation

**Abstract:** In these modernized days, people are being preoccupied with office, school, and business work like never before. This drives them to forget to conserve energy and electricity bills by turning the lights, fans, and other electronic appliances off when not in use. We all know this causes intermittent energy wastage and points to climate changes. When glancing at the numbers, we can save up to 1500Rs per year by switching off a fan and a light when not being used. Without the help of modern technology, these responsibilities can't be efficiently fulfilled. And that's what we have accomplished in this project. We have designed an energy supervision system by weighing the affordability of assembling the system and seamless switching actions of the devices according to the user's need.

Some people are very attentive as they will switch off the lights and fans while they leave the room. But when a person has to walk in out of a room more often, pondering on switching off the lights may influence the quality of their life. We designed this system termed “**Object detection based electrical appliances controlling system**” that turns off the light, fan, and different essential appliances when the person moves out of the room. One step further, it was also customized to automatically turn on the same electrical devices when the person enters the room. The system has an optional camera unit that helps to find the profile of each individual. This optional unit facilitates the system to manipulate the electrical appliances according to the individual's desire. A supplementary mobile application is in sync with this profile-based system that enables the individual to adjust the states of the appliances for separate rooms.

This IoT-based appliance controlling system would be a great solution to conserve energy at homes, schools, and corporate amenities. Our country can save millions of Rupees by lowering the electricity produced each year. Regulated fossil fuel burning could also contribute to stopping climatic changes. However, this could help energy conservation organizations to make the goal of rendering electricity to every rural area on Earth.

