

FINAL YEAR PROJECT REPORT

Image Sensing Automatic Device Control



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Image Sensing Automatic Device

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Dedication

This project is dedicated to the most honorable person of this world, The Holy Prophet (P.B.U.H) who take all mankind from the deep darkness to the light of knowledge, who show us the right way of Allah Almighty.

After that our project is dedicated to our beloved Parents and respectable Teachers, who teach us how to live and survive in this tough world.

Our special dedication is to our Project Advisor Mr. Khan M. Nazir who familiarizes us with a field which was completely new for us and he helps us by correcting our mistakes.

Acknowledgement

We are greatly thankful to Allah Almighty who provides all the resources of every kind to us, so that we make the proper use for the benefit of mankind. May He keep providing us with all the resources, and the guidance to keep helping the humanity.

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Abstract

As we know, that a lot of energy is wasted when electrical appliances such as Fan, AC, TV etc. are left “ON” and there is no one in the room. So we proposed a mechanism which will sense the presence/absence of human being in the living area and turn “ON/OFF” the appliances accordingly to minimize the energy loss. In this project we are trying to reduce the waste consumption of electricity.

Our project is mainly consisting on the Image Processing through MATLAB. The major parts, that discussed in this report are: (1) Coding in MATLAB, (2) Serial Communication, (3) Hardware.

In this project the detection of object is done by Viola Jones Algorithms. So the details of this Algorithm, Coding and complete hardware description is also included in this report.

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Chapter 1 INTRODUCTION

1.1 Background

Since the beginning of the world, the human always try to get the energy and use it in their own accordance. There was an era, when fire was invented and the whole world was surprised on this marvel. But now a day's most of the energy is wasted due to the negligence of its importance. That's why from last century, extensive researches has been made on the energy savings. It is the reason that we decide to build a project which is used for that purpose.

1.2 Introduction

A lot of energy is wasted when electrical appliances such as Fan, AC, TV etc. are left "ON" and there is no one in the room. We proposed a mechanism which will sense the presence/absence of human being in the living area and turn "ON/OFF" appliances accordingly.

In this Project, we turn ON ceiling fan and bulb by detecting the presence of human body in the room. Through this project, we can implement the same logic to other appliances of our specific area to minimize the loss of energy.

We are using the MATLAB software for detecting the human body. And get the result in digital form for communication. After receiving that result, our control circuit will turn ON/OFF the desired appliance.

1.3 Why it Needs.

Our purpose is

- To introduce the people with new technology.
- To minimize the loss of energy.
- By implementing this project, anyone can save the energy in their respective places.

1.4 Block Diagram

