Color Detection Via Webcam

Project Advisor: Syed Mohsin Ali

Submitted by:

(Ali Ehsan – 101519-200)

(Husnain Shabli – 071020-196)

Department of Electrical Engineering
School of Engineering

University of Management and Technology, Lahore

DEDICATION

To our respected parents whose utmost love, care and struggle against all odds brought us to this height of knowledge with the blessings and help of the ALLAH ALMIGHTY

COLOR FILTRATIONS VIA WEBCAM

Advisor:

Syed Mohsin Ali

Project by:
(Ali Ehsan – 101519-200)

(Husnain Shabli – 071020-196)

December 2013

School of Engineering
UNIVERSITY OF MANAGEMENT AND TECHNOLOGY, LAHORE

Submitted to University of Management and Technology in fulfillment of the requirements for the degree of Bachelor of Science

Approved by:

ADVISOR: _____

MEMBER I: _____

MEMBER II: _____

Acknowledgements

First, we are grateful to ALMIGHTY ALLAH who gave us the strength to achieve our goals. Without HIS divine help, we could not have completed this project. Secondly, we would like to pay deep regards to our parents whose selfless and extreme love provided us with the required motivation, courage and confidence to complete our tasks. We would like to salute them because of their patience in managing with our busy routines and tight schedules.

We truly acknowledge the cooperation and help provided by Mr. Syed Mohsin Ali and Mr. Ali Murtaza. They have been constant source of guidance throughout the course of this project. They were cooperative through our complete voyage and provided us with every facility whenever and whatever was required for our project.

In the end, we are grateful to our friends who were always there to give us company whenever we needed motivation and confidence. They created the right mix of work atmosphere in the university, which led us all to complete our project successfully. We would also like to thank the lab attendants who provided us with all the equipment during this project.

Abstract

Image processing is the process of arbitrarily manipulating an image to achieve certain pre-defined requirements. These requirements can range from aesthetic standards to supporting a preferred reality. To be concise, image processing can be defined as a means of translation between the human visual system and digital imaging devices. The human visual system differs greatly from digital imaging devices as it does not perceive the world in the same manner as digital detectors do. Moreover, digital imaging involves noise and bandwidth restrictions imposed by detectors and display devices. Salient differences between the human visual system and digital detectors will be shown in this project report along with the basic processing steps that are needed for translation between the two. It is ensured that the image processing is approached in a manner that is consistent with standard scientific methods to allow others to validate and reproduce the findings. This is done through recording and reporting processing actions ad applying similar treatment to adequate control images.

Table of Contents

Table of Figures