

# **COLOUR BASED PRODUCT SORTING USING ARDUINO NANO**

## **PROJECT REPORT**

Submitted to

**GOVERNMENT COLLEGE OF ENGINEERING, JALGAON**

(An Autonomous Institute of Government of Maharashtra and Affiliated to  
Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon)

in partial fulfillment of the requirements for the degree of  
Bachelor of Technology Electronics and Telecommunication Engineering

by

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**DEPARTMENT OF  
ELECTRONICS AND TELECOMMUNICATION ENGINEERING  
GOVERNMENT COLLEGE OF ENGINEERING, JALGAON  
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# **GOVERNMENT COLLEGE OF ENGINEERING, JALGAON**

(An Autonomous Institute of Government of Maharashtra and Affiliated to  
Kavayitri Bahinabai Chaudhari North Maharashtra University, Jalgaon)

## **Department of Electronics and Telecommunication Engineering**



### **CERTIFICATE**

This is to certify that the project entitled, “**COLOUR BASED PRODUCT SORTING USING ARDUINO NANO**”, which is being submitted herewith for the award of Bachelor of Technology in Electronics and Telecommunication is the result of the work completed by **ASHISH RAVINDRA JADHAV, ROHIT MADHUKAR JADHAV** and **KAJAL SAHEBRAO RAJPUT** under my supervision and guidance. With the declaration of students, the work embodied in this project has been contributed to the best of my knowledge and belief.

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(Assistant Professor)  
Guide

Dr. S. P. Mohani  
(Head of Department)

Dr. G. M. Malwatkar  
(Principal)

Examiner

## DECLARATION

We hereby declare that the project entitled, “**COLOUR BASED PRODUCT SORTING USING ARDUINO NANO**” was carried out and written by us under the guidance of Mrs. M. R. DHOTRE Assistant Professor in Electronics and Telecommunication Engineering, Government College of Engineering, Jalgaon. The work embodied in this project has been genuinely contributed by us.

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## **ACKNOWLEDGEMENT**

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## **ABSTRACT**

Sorting of object is an essential mechanical process in which difficult work is quite required. Chronic manual laborer arranging makes consistency troubles. Machines can perform mainly dreary assignments superior to human beings. Laborer exhaustion on sequential manufacturing structures can result in decreased execution, and purpose troubles in retaining up object fine. An employee who has been appearing research undertaking over and over may additionally in the end forget about to recognize the color of item, but a machine in no way. On this paper a compact record close to arranging of articles based totally on shading has been implemented making use of TCS3200 color sensor with Servo Motors associated with Arduino Nano.

The objective of this project is to develop an automated color-based product sorting system using an Arduino Nano microcontroller, TCS3200 color sensor, and two servo motors. The system utilizes the TCS3200 color sensor to detect and measure the color of the product and sorts them into respective categories using a rotating platform on a servo motor and a separator controlled by a servo motor. The Arduino Nano is the main controller, which receives data from the TCS3200 color sensor and provides instructions to the servo motors. The system is designed to be compact, low-cost, and efficient, with a high accuracy rate. The project has the potential to be used in various industries, such as food processing, pharmaceuticals, and manufacturing, where automated product sorting is required.

# TABLE OF CONTENTS

Sr. No.	Title	Page No.
	CERTIFICATE	I
	DECLARATION	II
	ACKNOWLEDGEMENT	III
	ABSTRACT	IV
	LIST OF FIGURES	VI
1	INTRODUCTION	1
	1.1 Introduction	1
	1.2 Motivation	3
	1.3 Background	3
	1.4 Project Specifications	4
2	LITERATURE SURVEY	6
	2.1 History	6
	2.2 Methodology	7
3	SYSTEM DESIGN & IMPLEMENTATION	8
	3.1 System Block Diagram	8
	3.2 Hardware Implementation	10
	3.3 Flowchart	23
	3.4 Arduino Code	24
4	PERFORMANCE ANALYSIS	28
	4.1 Testing Objectives	28
	4.2 Experimental Objectives	29
	4.3 System Hardware	30
	4.4 Cost Analysis	31
5	SUMMERY AND CONCLUSION	32
	5.1 Summery	32
	5.2 Conclusion	33
	5.3 Workplan	35
	5.4 Future Scope	36
6	REFERENCES	39
	SPONSERSHIP CERTIFICATE	40
	APPENDIX-A	41

## **LIST OF FIGURES**

<b>Figure No.</b>	<b>Title</b>	<b>Page No.</b>
1.1	RGB Color Model	1
3.1	System Block Diagram	8
3.2	Circuit Diagram	10
3.3	Arduino Nano Diagram and pinout	11
3.4	Arduino Nano PCB Layout	14
3.5	Power Supply diagram	15
3.6	Power Supply Adapter	16
3.7	TCS3200 Colour Sensor	17
3.8	TCS3200 Pinout	18
3.9	MG90S Servo motor	20
3.10	Micro servo 9G	21
3.11	Jumper cables	22
3.12	Acrylic and Sunboard sheets	23
3.13	System flowchart	30
4.1	Project Hardware	35
5.1	Workplan Pie chart	36

## **LIST OF TABLES**

<b>Table No.</b>	<b>Title</b>	<b>Page No.</b>
3.1	Servo Features	20
4.1	Cost Analysis	31