

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,  
BELAGAVI - 590018**



**MINI PROJECT ASSIGNMENT REPORT**

**On**

**“APPLYING COLOR FILTERS: CREATING  
ARTISTIC IMAGE EFFECTS”**

**A report submitted in partial fulfillment of the requirements for**

**ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING**

**7<sup>th</sup> Semester**

**Submitted by**

**SHIVARAJ B PATIL**

**4AL21AI046**

**SYED TASLEEM AHMED**

**4AL21AI053**

**Y JAYAPRAKASH YADAV**

**4AL21AI061**

**Under the Guidance of**

**Dr. Ganesh K**

**Associate Professor**



**DEPARTMENT OF ARTIFICIAL INTELLIGENCE & MACHINE LEARNING  
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY MIJAR,**

**(Unit of Alva's Education Foundation ®, Moodbidri)**

**Affiliated to Visvesvaraya Technological University, Belagavi,**

**Approved by AICTE, New Delhi, Recognized by Government of Karnataka.**

**Accredited by NACC with A+ Grade**

**Shobavana Campus, Mijar, Moodbidri, D.K., Karnataka**

**2024 – 2025**

# ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY

(Unit of Alva's Education Foundation ®, Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi,

Approved by AICTE, New Delhi, Recognized by Government of Karnataka.

**Accredited by NACC with A+ Grade**

Shobavana Campus, Mijar, Moodbidri, D.K., Karnataka

## DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

### CERTIFICATE

This is to certify that the Mini Project entitled **“APPLYING COLOR FILTERS: CREATING ARTISTIC IMAGE EFFECTS”** has been successfully completed and report submitted in A.Y 2024-25. It is certified that all corrections/suggestions indicated Presentation session have been incorporated in the report and deposited in the department library.

The assignment was evaluated and group members marks as indicated below

SI	USN	NAME	Presentation Skill (5)	Report (15)	Subject Knowledge (3)	Question and Answer (2)	Total Marks (25M)
1	4AL21AI043	SHIVARAJ B PATIL					
3	4AL21AI053	SYED TASLEEM AHMED					
4	4AL21AI061	Y JAYAPRAKASH YADAV					

**Dr. Ganesh K**

Professor

## ACKNOWLEDGEMENT

The satisfaction and euphoria that accompany a successful completion of any task would be incomplete without the mention of the people who made it possible, success is the epitome of hardwork and perseverance, but steadfast of all is encouraging guidance.

So, with gratitude, we acknowledge all those whose guidance and encouragement served as a beacon of light and crowned the effort with success.

The selection of this mini-project work as well as the timely completion is mainly due to the interest and persuasion of our Project guide **Dr. Ganesh K**, Professor, Department of Artificial Intelligence & Machine Learning. We will remember his contribution forever.

We sincerely thank, **Prof. Harish Kunder**, Associate Professor and Head of the Department of Artificial Intelligence & Machine Learning who has been the constant driving force behind the completion of the project.

We thank our beloved Principal, **Dr. Peter Fernandes**, for his constant help and support throughout.

We are indebted to the **Management of Alva's Institute of Engineering and Technology, Mijar, Moodbidri** for providing an environment which helped us in completing our mini project.

Also, we thank all the teaching and non-teaching staff of Department of Artificial Intelligence & Machine Learning for the help rendered.

<b>SHIVARAJ B PATIL</b>	<b>4AL21AI046</b>
<b>SYED TASLEEM AHMED</b>	<b>4AL21AI053</b>
<b>Y JAYAPRAKASH YADAV</b>	<b>4AL21AI061</b>

## ABSTRACT

This study investigates the creation and application of artistic color filters for enhancing digital images, achieving a seamless blend of technical accuracy and creative flair. Utilizing Scilab as the primary platform, the methodology facilitated the development of efficient and customizable filters, adaptable to diverse applications. The filters excelled in preserving color fidelity, and enhancing brightness and contrast, all while delivering real-time performance even on high-resolution images. Challenges, including overprocessing and device variability, were resolved using adaptive algorithms and optimization techniques. The aesthetic enhancements achieved by these filters resonate across domains such as photography, social media, marketing, and augmented reality, enriching visual storytelling and audience engagement. By allowing tailored adjustments, the filters empower users to craft effects aligned with their artistic vision, transforming ordinary visuals into compelling artworks. This research underscores the convergence of digital image processing and creative design, emphasizing the filters' transformative potential. These advancements pave the way for broader applications and future innovations, solidifying the role of artistic filters in redefining modern digital imagery. In bridging technology with artistry, this study exemplifies the significant opportunities for growth in the field of image processing.

# TABLE OF CONTENTS

CHAPTER NO.	DESCRIPTION	PAGE NO.
1	INTRODUCTION	1-3
1.1	Background	1
1.2	Problem Statement	2
1.3	Objectives	3
1.4	Scope	3
2	OBJECTIVE	4-5
3	METHODOLOGY	6-9
3.1	Literature Review and Theoretical Foundation	6
3.2	Tools and Technologies	7
3.3	Filter Design and Development	7
3.4	Experimental Application and Testing	8
3.5	Case Studies and Real-World Applications	8
3.6	Challenges and Solutions	9
3.7	Documentation and Knowledge Sharing	9
4	RESULTS	10-11
5	CONCLUSION	12

## LIST OF FIGURES

FIGURE NO.	DESCRIPTION	PAGE NO.
4.1	Input image	11
4.2	Output images	11