

**A Project Report**

Submitted in partial fulfillment of the Requirements for the award of the Degree of

**BACHELOR OF SCIENCE (COMPUTER SCIENCE)**

By,

**Ms. (STUDENT NAME)**

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Under the esteemed guidance of,

**Prof. (PROJECT GUIDE NAME)**



**MALAD KANDIVALI EDUCATION SOCIETY'S**

**DEPARTMENT OF COMPUTER SCIENCE OF**

**NAGINDAS KHANDWALA COLLEGE**

**(AUTONOMOUS)**

**(Reaccredited 'A' Grade by NAAC)**

**(AFFILIATED TO UNIVERSITY OF MUMBAI)**

**(ISO 9001:2015)**

**2023-2024**



**MALAD KANDIVALI EDUCATION SOCIETY'S**  
**NAGINDAS KHANDWALA COLLEGE OF COMMERCE,**  
**ARTS & MANAGEMENT STUDIES & SHANTABEN NAGINDAS**  
**KHANDWALA COLLEGE OF SCIENCE**  
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**(ISO 9001:2015)**

**CERTIFICATE**

This is to certify that the project entitled, "**WE SEE – A Visual Reader**" is bonafide work of **Ms. SAACHI GHANSHYAM SHINDE** bearing roll no. **3510848** submitted in partial fulfillment of the requirements for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE**, specializing in **ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING** from University of Mumbai.

**Internal Guide**

**Coordinator**

**External Examiner**

**Date:**

**College Seal**

# **DECLARATION**

I, **Saachi Ghanshyam Shinde**, bearing roll number **3510848**, declare that the project entitled "**We See - A Helper for the Visually Impaired**" conducted at **Nagindas Khandwala College**, is entirely my original work.

I hereby affirm that this project has not been duplicated for submission to any other university, and to the best of my knowledge, no other individual has submitted it elsewhere.

This project is undertaken in fulfillment of the requirements for the award of the Honors degree of **Bachelor of Science in Computer Science**, specializing in **Artificial Intelligence and Machine Learning** as part of the final semester curriculum.

Any external sources or references utilized in the project have been duly acknowledged through proper citation. Therefore, I understand the importance of academic integrity, and I take full responsibility for the content and originality of this project.

**April 2024**

**Ms. Saachi Ghanshyam Shinde**

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# **ACKNOWLEDGEMENT**

The successful completion of this project has been made possible through the resolute support and guidance of many remarkable individuals.

I extend my sincere thanks to the monumental figures of my college, for their great support throughout my graduation years.

**Dr. (Mrs.) Ancy Jose**, Director of MKES INSTITUTIONS,

**Prof. Dr. Moushumi Datta**, Principal,

**Prof. Dr. Mona Mehta**, Vice Principal & IQAC Coordinator,

I take this opportunity to express my profound gratitude and deep regards to **Dr. Rashmi Tiwari**, Head of Department (iNurture) for her continuous support and encouragement.

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In conclusion, my deepest appreciation goes to all those mentioned above, as well as others who may not be explicitly named but have played a part in this journey. Their collective efforts have been the driving force behind the successful completion of this project.

# **ABSTRACT**

**“We See - A Helper for the Visually Impaired”** – Simply, a web application for individuals with low vision capabilities to excel in daily tasks.

The project, **‘We See’** is aimed to address the challenges faced by visually impaired individuals by leveraging cutting-edge technologies, primarily based in Computer Vision and Digital Image Processing, specifically built upon the foundations of Deep Learning.

It is an innovative assistive tool that empowers visually impaired users to access written and digital content seamlessly, by leveraging a device's camera to provide real-time information about the user's surroundings.

Key structures of **‘We See’** include real-time text recognition, real-time object detection and audio output capabilities, enabling users to effortlessly comprehend and interact with their surroundings. Moreover, the system is designed to adapt to various environmental conditions, providing a robust solution for users in different settings.

In conclusion, this project contributes to the inclusive integration of individuals with visual disability into our society by fostering independent access to information and promoting equal opportunities.

Through the integration of state-of-the-art technologies in Artificial Intelligence and Machine Learning, this project aligns with the overarching goal of creating a more accessible and inclusive world for all individuals.

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