RV College of Engineering®

Mysore Road, RV Vidyaniketan Post,Bengaluru - 560059, Karnataka, India

Screenless Displays: The Future of Visual Interaction

TECHNICAL SEMINAR REPORT

MCA492L

submitted by

Rajesha C U 1RV23MC080

under the guidance of

Dr. Deepika K
Associate Professor
Department of MCA

in partial fulfilment for the award of degree of

Master of Computer Applications

2024-2025

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DEPARTMENT OF MASTER OF COMPUTER APPLICATIONS

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CERTIFICATE

Certified that the Technical Seminar titled '**Screenless Displays: The Future of Visual Interaction'** is carried out by **Rajesha C U (1RV23MC080)** a bonafide student of RV College of Engineering®, Bengaluru, in partial fulfilment for the award of **Master of Computer Applications** of **RV College of Engineering®, Bengaluru affiliated to Visvesvaraya Technological University, Belagavi** during the year **2024-2025**. It is certified that all corrections/suggestions indicated for the internal assessment have been incorporated in the report deposited in the department library. The Seminar report has been approved as it satisfies the academic requirements in respect of technical seminar work prescribed by the institution for the said Degree.

Dr. Deepika K	**Dr. Jasmine KS**
Associate Professor	**Associate Professor and Director,**
Department of MCA,	**Department of MCA,**
RVCE, Bengaluru - 59	**RVCE, Bengaluru - 59**

External Viva Examination

Name of Examiner	**Signature with Date**
1.	
2.	

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DECLARATION

I, **Rajesha C U**, the student of Fourth Semester, Department of MCA, RV College of Engineering®, Bengaluru-560059, bearing USN: **1RV23MC080** hereby declare that the technical seminar titled **'Screenless Displays: The Future of Visual Interaction'** has been carried out by me. It has been submitted in partial fulfilment of the program requirements for the award of Degree in **Master of Computer Applications** of **RV College of Engineering®, Bengaluru** affiliated to **Visvesvaraya Technological University, Belagavi** during the year **2024-2025**.

Further, I declare that the content of the seminar has not been submitted to any other university or institution for the award of any other degree or diploma.

Place: Bengaluru
Date of Submission:01/08/2025

Signature of the Student

Student Name:Rajesha C U
USN:1RV23MC080
Department of Master of Computer Applications
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Bengaluru - 560059

ACKNOWLEDGEMENT

The successful completion of the seminar on “Screenless Display: The Future of Visual Interaction” is the result of invaluable support, guidance, and encouragement from several individuals and institutions.

Appreciation is extended to the management and faculty of RV College of Engineering, Bengaluru, for providing the academic infrastructure and resources essential for conducting this seminar effectively.

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Gratitude is also expressed to Dr. Jasmine K. S, Associate Professor and Director, Department of Master of Computer Applications, for her unwavering support and for fostering a scholarly environment conducive to research and technological inquiry.

The seminar explores the cutting-edge domain of screenless display technology, offering insights into how visual interaction can be revolutionized beyond traditional screen-based systems. By examining various approaches such as retinal projection, holography, and brain-computer interfacing, this work highlights the immense potential of screenless displays to redefine communication, accessibility, and user experience in future digital systems. The knowledge gained through this seminar contributes meaningfully to the broader discourse on emerging interface technologies and human-centric design.

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ABSTRACT

In today’s rapidly evolving digital world, display technologies play a central role in how users interact with information. Traditional screens, however, come with limitations such as size constraints, eye strain, environmental impact due to e-waste, and limited usability in certain conditions. Screenless display is an emerging and innovative technology that offers a solution by eliminating the need for physical screens altogether. It leverages advanced techniques like retinal projection, holography, and augmented reality to present visual data directly to the human eye or into the surrounding environment.

This seminar explores the concept of screenless display, its underlying technologies, key applications, and relevance in domains such as healthcare, defense, automotive, education, and assistive technology. It also discusses sustainability aspects including reduced electronic waste, lower power consumption, and eco-friendly material use. A proposed system is presented using a wearable retinal display to demonstrate the practical application of the concept. Additionally, the report outlines unresolved societal challenges that can be addressed by this technology and highlights future directions for development and adoption.

Through this study, the seminar aims to emphasize the potential of screenless display to transform human-computer interaction and pave the way for more sustainable, efficient, and immersive visual communication systems.

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