

Cover Letter

Aayush Verma

Undergraduate Student

Vellore Institute of Technology

verma.aayush1802@gmail.com

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Editor-in-Chief

Journal of Medical Systems

Subject: Submission of Manuscript: *Detection of Diabetic Retinopathy using Deep Learning*

Dear Editor-in-Chief,

We are pleased to submit our manuscript titled *Detection of Diabetic Retinopathy using Deep Learning* for publication in the *Journal of Medical Systems*. This research presents a comparative evaluation of four state-of-the-art deep learning architectures—DenseNet201, Inception v3, CNN, and VGG16—for the automatic classification of diabetic retinopathy (DR) stages using high-resolution retinal images.

Diabetic retinopathy remains a leading cause of vision loss globally, underscoring the urgent need for accurate and scalable diagnostic solutions. Our findings demonstrate that Inception v3 achieved the highest accuracy (80%) among the tested models, showcasing the potential of advanced deep learning approaches to improve early detection and management of DR. By leveraging robust neural networks, this work contributes to the growing intersection of AI and healthcare, providing actionable insights for both research and clinical practice.

We believe that our manuscript aligns with the scope and readership of the *Journal of Medical Systems*, particularly given its focus on innovative computational methods and their applications in medical systems. The integration of cutting-edge machine learning techniques explored in this study has the potential to address pressing challenges in healthcare delivery, particularly in resource-limited settings.

This manuscript has not been published elsewhere and is not under consideration by another journal. All authors have read and approved the manuscript, and there are no conflicts of interest to disclose.

We appreciate your time and consideration of our submission and look forward to the possibility of contributing to the esteemed body of work in the *Journal of Medical Systems*. Please do not hesitate to contact me if further details or clarifications are needed.

Yours sincerely,

Aayush Verma, Student

On behalf of all co-authors