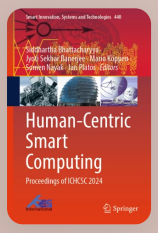
Leveraging Generative AI in Effective Medical Diagnosis and Delivery of Healthcare Services

| Conference paper | First Online: 29 July 2025

| pp 447–458 | Cite this conference paper



Human-Centric Smart Computing

(ICHCSC 2024)

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Part of the book series: Smart Innovation, Systems and Technologies ((SIST,volume 440))

Included in the following conference series: International Conference on Human-Centric Smart Computing

Abstract

This research explores the transformative potential of cutting-edge artificial intelligence (AI) systems that integrate images, text, and videos to assist healthcare professionals in

diagnosing medical conditions with greater accuracy and efficiency. Our study focuses on the analysis of patient-reported symptoms through simple yet targeted questions, enabling the AI to suggest personalized treatment options. By leveraging these versatile multimodal AI models, we aim to significantly accelerate the diagnostic process, reducing the time and effort required by doctors while improving the precision of medical assessments. This approach has the potential to revolutionize patient care by offering tailored solutions that enhance the overall quality of healthcare delivery. The application of such innovative technology could lead to improved patient outcomes and experiences across a wide range of healthcare environments, from primary care clinics to specialized medical facilities, ultimately advancing the effectiveness of healthcare systems globally.

Abbreviations

AI: Artificial Intelligence

NCBI: National Center for Biotechnology Information

NLU: Natural Language Understanding

NLP: Natural Language Processing

NIH: National Institutes of Health

LoRA: Low Rank Adaptation

LLMs: Large Language Models

IA: Information Architecture

HIPAA: Health Insurance Portability and Accountability Act

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Pal, D., Mondal, D., Gupta, A., Kaushal, K., Das, A., Sahana, S. (2025). Leveraging Generative AI in Effective Medical Diagnosis and Delivery of Healthcare Services. In: Bhattacharyya, S., Banerjee, J.S., Köppen, M., Nayak, S., Platos, J. (eds) Human-Centric Smart Computing. ICHCSC 2024. Smart Innovation, Systems and Technologies, vol 440. Springer, Singapore. https://doi.org/10.1007/978-981-96-3420-0_37

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DOI	Published	Publisher Name
	29 July 2025	Springer, Singapore

https://doi.org/10.1007/978-981-96-3420-0_37

Print ISBN
978-981-96-3419-4

Online ISBN
978-981-96-3420-0

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