

CareConnect: “A Medical Blogging and Symptom Analysis Platform”

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Abstract— CareConnect is an innovative web-based platform designed to combine community-driven health storytelling with AI-powered medical insights. The system enables users to share their personal health experiences through blogs, including details about symptoms, diagnosis, treatment, and recovery. By fostering an open and supportive environment, CareConnect encourages knowledge sharing and emotional support among individuals facing similar medical challenges. In addition to its blogging functionality, the platform integrates a machine learning-based symptom analysis system. Through a structured, form-based interaction, users can input details about their symptoms, medical history, and lifestyle. The system then analyzes the data to predict possible diseases and provides recommendations for further medical consultation. This feature is designed to raise awareness and guide users toward professional care rather than replace it. Technologically, CareConnect is developed using React for the frontend, Node.js for the backend, and MongoDB for data storage. The machine learning model enhances the platform’s diagnostic capability by offering intelligent, data-driven suggestions. The project’s dual functionality— combining patient storytelling and AI-based symptom prediction—aims to create an engaging, informative, and socially impactful health ecosystem.

I.INTRODUCTION

In today’s digital age, people increasingly turn to online platforms to seek health information, share experiences, and find emotional support. However, most available resources either focus solely on medical information or personal storytelling, lacking an integrated approach that combines both community engagement and intelligent health insights. To bridge this gap, CareConnect has been developed as an innovative medical blogging website that connects users through shared health experiences while also providing AI-powered guidance through symptom analysis. CareConnect allows individuals to document and share their personal health journeys — from the onset of symptoms to diagnosis, treatment, and recovery. This open exchange of

experiences fosters awareness, empathy, and learning within the community, helping others facing similar health issues feel understood and informed. Beyond serving as a supportive blogging platform, CareConnect incorporates a form-based symptom analysis system that leverages machine learning and structured medical data. Through a guided questionnaire, the system collects user inputs such as symptoms, medical history, and lifestyle factors, then predicts potential diseases and suggests appropriate next steps for consultation. While not a replacement for professional medical advice, this feature acts as a preliminary awareness and recommendation tool.

II.LITERATURE SURVEY

In a systematic review conducted by Wallace et al. [1], the diagnostic and triage accuracy of various online symptom checkers was found to vary considerably, with overall performance being relatively low. The study highlighted significant discrepancies across different platforms and medical conditions, underscoring potential safety and reliability concerns. The authors emphasized that as telemedicine continues to expand—and with some applications even receiving institutional endorsements such as from the NHS—there is an urgent need to re-evaluate existing regulatory frameworks. They also advocated for the establishment of standardized medical datasets to enhance model performance, consistency, and patient safety. Riboli-Sasco et al. [2], 2025 — Diagnostic and triage accuracy of online symptom checkers. This review found that online symptom checkers (OSCs) are not yet reliable alternatives to traditional triage methods. Performance varied widely—some tools excelled in triage but not diagnosis. Accuracy depended on factors like AI use, demographic data, diagnosis limits, and triage protocols. Population and regional differences also influenced outcomes, with issues of over- and under triage affecting service use. The study emphasized the need for standardization

and regulatory oversight before routine clinical adoption. You et al. [3] conducted the first systematic review on the user experience of symptom checkers (SCs), highlighting that most studies prioritized technical performance over users' emotional and real-world needs. The review noted limited focus on empathy, transparency, and patient-centred design, with research largely confined to developed regions. The authors called for more qualitative and mixed-method studies to better understand user trust, satisfaction, and behaviour, encouraging a more human-centred and context-aware approach to SC design. Gómez et al. [4] explored the role of LLM-based conversational agents with rational and empathic personas in healthcare triage. Their findings revealed that both personas significantly enhanced users' diagnostic accuracy and confidence compared to no AI assistance. However, differences in personality styles had minimal impact on user satisfaction or perceived empathy. The study concluded that while LLMs can effectively support medical triage, future research should focus on improving trust, emotional engagement, and safety validation in AI-driven healthcare systems. Aissaoui Ferhi L. et al. [5] developed a symptom-based health checker using Naive Bayes and Logistic Regression models, achieving high precision and robustness in diagnostic predictions. The models were rigorously validated through confusion matrices and ROC-AUC analysis, confirming their reliability for medical applications. This work establishes a strong framework for creating accurate and user-friendly diagnostic tools, emphasizing the importance of data quality and validation techniques. The authors suggest expanding disease coverage and incorporating real-world data in future studies to enhance the system's clinical relevance and scalability. Sogandi F. et al. [6] developed an AI-based disease prediction system using data preprocessing, the Apriori algorithm, and various classifiers to identify correlations between symptoms and diseases. The SR method achieved the best accuracy, effectively linking factors like age and cholesterol to conditions such as Rheumatoid Arthritis. The system shows potential for clinical decision support, though the authors note dataset limitations and suggest using larger, more diverse data and advanced methods for improved accuracy. Cheah et al. [7] reviewed the use of ML and AI tools in infectious disease surveillance, diagnosis, and prognosis. They found that Explainable AI and ensemble learning offer higher accuracy and

transparency, making them promising for clinical use. The study emphasizes the need for validation in larger cohorts but supports using AI to enhance clinical decision-making and improve healthcare outcomes. Kuipers et al. [8] conducted a large online field experiment to study how emotion, topic, appeal, and linguistic style affect awareness and engagement in online health communities (OHCs) for atrial fibrillation patients. They found that fear combined with self-protection generated the highest awareness, while love paired with affiliation or kin care boosted engagement. Expert messages attracted more clicks, whereas patient testimonials encouraged longer engagement. A first-person style improved engagement but had little effect on awareness. The study suggests that tailoring emotional tone and message type to audience motivation can enhance OHC participation. However, results may vary by context, culture, and demographics, so future research should test these strategies across diverse chronic illness groups to confirm their effectiveness.

III.CONCLUSION

The implementation of CareConnect successfully delivers a functional and user-friendly platform that integrates community-driven interaction with AI-powered health assistance. The system enables users to share personal medical experiences through structured blogs, allowing others to gain insights and relate to similar health conditions. The story management feature operates efficiently, supporting creation, viewing, and interaction through reaction mechanisms such as helpful, relatable, and inspiring. The AI-based symptom analysis feature provides meaningful preliminary insights by analysing user inputs and generating possible health conditions along with general recommendations. This enhances user awareness and supports informed decision-making without replacing professional medical advice. The integration of a locally hosted AI model ensures data privacy and reliable performance.

The connection and messaging features facilitate effective communication between users, allowing them to build supportive networks and exchange experiences. Although the chat system uses HTTP polling, it functions reliably for real-time-like interactions in a small-scale environment.

Overall, the system meets its intended objectives by providing a secure, interactive, and informative platform. It demonstrates the successful integration

of full-stack technologies and AI to address real-world healthcare communication challenges.

IV.SUMMARY

CareConnect successfully demonstrates the development of a full-stack web application that combines community interaction with AI-driven health support. The platform provides users with a space to share personal medical experiences, learn from others, and gain preliminary insights into their symptoms. By integrating features such as story sharing, user connections, messaging, and AI-based symptom analysis, the system offers a comprehensive and meaningful user experience.

The use of modern technologies such as React, Node.js, Express, and MongoDB ensures a scalable and maintainable architecture. The incorporation of a locally hosted AI model enhances data privacy and reduces dependency on external services, making the system more reliable and secure. Despite certain limitations, such as the use of HTTP polling for chat functionality, the application performs effectively within its intended scope.

Overall, CareConnect addresses an important need for accessible health-related communication and support. It highlights the potential of combining social platforms with intelligent systems to assist users in understanding and managing their health. The project serves as a strong foundation for future enhancements, including real-time communication, advanced analytics, and broader accessibility.

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