



A Survey of Health Care Chatbot for Patient Support

Pooja Girish¹, Mayank Kumar², Sharmila Chidaravalli³

Department of Information Science and Engineering^{1,2,3}

Global Academy of Technology, Bengaluru, India

poojagirish2203@gmail.com

Abstract: This literature survey delves into the evolving realm of healthcare chatbots, analyzing a variety of research papers on AI chatbot systems. The papers cover diverse objectives, methodologies, and applications within healthcare, including microservice architectures for chronic patient support, disease prediction, herbal remedies, and mental health support. Common threads across the papers include the adoption of natural language processing, machine learning, and AI markup languages. Ethical considerations, such as data privacy and consent, are identified as crucial aspects. Some papers focus on specific medical domains, while others propose comprehensive frameworks integrating IoT and health knowledge graphs. The survey highlights challenges like unified semantic approaches for patient data and underscores the ongoing need for research to address gaps, enhance chatbot intelligence, and ensure ethical deployment in real-world healthcare scenarios.

Keywords: healthcare chatbots, AI chatbot systems, literature survey, natural language processing, machine learning, AI markup languages

REFERENCES

- [1] Divya, Indumathi, Ishwarya, Priyasankari, & Devi, K.K. (2018). A Self-Diagnosis Medical Chatbot Using Artificial Intelligence.
- [2] Surya Roca, Jorge Sancho, José García, Álvaro Alesanco, Microservice chatbot architecture for chronic patient support, Journal of Biomedical Informatics, Volume 102, 2020, 103305, ISSN 1532-0464, <https://doi.org/10.1016/j.jbi.2019.103305>.
- [3] Kanniappan, Jayashree & A, Monika & R, Preetha & P, Piraisoodan. (2020). The Smart Health Care Prediction using Chatbot. International Journal of Recent Technology and Engineering (IJRTE). 9. 75-78. 10.35940/ijrte.A3007.079220.
- [4] AI Based Healthcare Chatbot System EasyChair Preprint no. 5260 March 31, 2021 <https://easychair.org/publications/preprint/xXXN>
- [5] Jagadeesh, Seema & S, Suman & R, Chirag & G, Vinay & D, Balakrishna. (2021). Doctor Chatbot – Smart Health Prediction. International Journal of Scientific Research in Science and Technology. 751-756. 10.32628/IJSRST2183172.
- [6] Batyrkhan Omarov, ZhandosZhumanov, Aidana Gumar and LeilyaKuntunova, "Artificial Intelligence Enabled Mobile Chatbot Psychologist using AIML and Cognitive Behavioral Therapy" International Journal of Advanced Computer Science and Applications(IJACSA), 14(6), 2023. <http://dx.doi.org/10.14569/IJACSA.2023.0140616>
- [7] Velasco, Vincent & Setiawan, Kevin & Sanjaya, Renaldo & Anggreainy, Maria & Kurniawan, Afdhal. (2023). AI Chatbot Technology to Predict Disease: A Systematic Literature Review. 97-101. 10.1109/AiDAS60501.2023.10284717.
- [8] Gupta, Vanshika & Joshi, Varun & Jain, Akshat & Garg, Inakshi. (2023). Chatbot for Mental health support using NLP. 1-6. 10.1109/INCET57972.2023.10170573.
- [9] Mrs. Rashmi Dharwadkar, Dr.Mrs. Neeta A. Deshpande "A Medical ChatBot". International Journal of Computer Trends and Technology (IJCTT) V60(1):41-45 June 2018. ISSN:2231-2803. www.ijcttjournal.org. Published by Seventh Sense Research Group.



IJARSCT

International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

IJARSCT

ISSN (Online) 2581-9429

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Impact Factor: 7.53

Volume 4, Issue 1, February 2024

- [10] Wang, Ruyi& Wang, Jiankun& Liao, Yuan & Wang, Jinyu. (2020). Supervised Machine Learning Chatbots for Perinatal Mental Healthcare. 378-383. 10.1109/ICHCI51889.2020.00086.
- [11] R. Matthew et al., "The Development of A Medical Chatbot Using The SVM Algorithm," 2022 4th International Conference on Cybernetics and Intelligent System (ICORIS), Prapatan, Indonesia, 2022, pp. 1-6, doi: 10.1109/ICORIS56080.2022.10031400.
- [12] Dahiya, Menal. (2017). A Tool of Conversation: Chatbot. INTERNATIONAL JOURNAL OF COMPUTER SCIENCES AND ENGINEERING. 5. 158-161.
- [13] @Booklet{EasyChair:2736, author = {Shifa Ghare and Sabreen Shaikh and Tasmia Bano Shaikh and Habib Fakih Awab}, title = {Self-Diagnosis Medical Chat-Bot Using Artificial Intelligence}, howpublished = {EasyChair Preprint no. 2736}, year = {EasyChair, 2020} }

