

AI-Driven Medical Chatbot for Predicting and Managing Infectious Diseases

Shalini Sivasamy

AI/ML Engineer, AI Automation, Webster Bank, USA

Abstract: *This paper explores the potential of chatbots to enhance the medical field by combating infectious diseases, including respiratory illnesses, zoonotic diseases, and viral outbreaks such as COVID-19. By increasing awareness among users, these chatbots can help individuals discover medical solutions to prevent and manage these conditions. We have developed a training model that facilitates better human interaction with databases through natural language processing, tailored to characterize users effectively. Our proposed AI chatbot model employs a recurrent neural network to ensure efficient interaction and prediction, addressing current deficiencies in guidelines for improving lifestyle programs. The model achieves a minimum loss of 0.112 and a maximum accuracy of 93. Additionally, this paper investigates the feasibility of implementing chatbots to offer 24/7 support, broaden healthcare services, and deliver personalized, real-time responses. Our conclusion emphasizes the capabilities, benefits, and challenges faced by healthcare chatbots during pandemics. This research aims to guide the development of chatbot technology, ensuring it remains innovative and effective in preventing infectious diseases, ranging from viral infections like influenza to emerging global health threats..*

Keywords: Artificial Intelligence, Deep Learning, LSTM algorithm, BiLSTM RNN, Natural Language Processing