A Review on Existing Health Care Monitoring Chatbots

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Abstract. Conversational agents often referred to as chatbots, are computer programs that mimic human-to-human interactions. They are natural language processing systems that are used as virtual conversational agents, emulating human interactions (talk with them whenever they want and are included in AI devices from a technological standpoint). These chatbots are used in different fields like business, banking industry etc. Also, a conversational bot with a voice and/or chat interface can help overcome the existing barriers to making primary healthcare affordable, accessible, and possibly sustainable in the rising digital economy. The goal of this study is to look at the characteristics, analyse the technologies, and find the flaws in chatbots employed in health-related sectors. This paper includes a literature survey along with summarized existing systems. According to the literature survey, these systems have used different frameworks of Natural Language Processing (NLP), Natural Language Understanding (NLU) technologies, and ML models. Also, this paper includes a survey conducted using 150+ participants to get a clear idea of the awareness and experience level of the people in using these systems. Although the highest level of advancement in chatbot-related technologies, the results of the survey concluded that both awareness and experience level in using healthcare chatbots are still in their infancy, and the patients' perspectives, motivation, and capabilities have not been considered when developing and assessing the effectiveness of healthcare chatbots. Thus, most people have mixed feelings about them despite huge technological advancements. Also, the reliability and accuracy of the instructions provided by chatbots, privacy, and security of personal data used in these chatbots, and methodologies for providing dependable have not been thoroughly investigated yet.

Keywords: Conversational Agents, Chatbots, Healthcare, Natural Language Processing,

Privacy, Security, Reliability. Natural Language Understanding