Automated Disease Prediction System (ADPS): A User Input-based Reliable Architecture for Disease Prediction

International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

Volume 133
Number 15

Year of Publication: 2016

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10.5120/ijca2016908193

Abstract

Rapid proliferation of Internet technology and handheld devices has opened up new avenues for online healthcare system. There are instances where online medical help or healthcare advice is easier or faster to grasp than real world help. People often feel reluctant to go to hospital or physician on minor symptoms. However, in many cases, these minor symptoms may trigger major health hazards. As online health advice is easily reachable, it can be a great head start for users. Moreover, existing online health care systems suffer from lack of reliability and accuracy. Herein, we propose an automated disease prediction system (ADPS) that relies on guided (to be described later) user input. The system takes input from the user and provides a list (topmost diseases have greater likelihood of occurrence) of probable diseases. The accuracy of ADPS has been evaluated extensively. It ensured an average of 14.35% higher accuracy in comparison with the existing solution.

References
8. Saba Bashir, Usman Qamar, Farhan Hassan Khan: “BagMOOV: A novel ensemble for heart disease prediction bootstrap aggregation with multi-objective optimized voting Received.”
14. Data Mining Concepts and Techniques, Third Edition: Jiawei Han, University of Illinois at Urbana–Champaign and Micheline Kamber Jian Pei, Simon Fraser University.
17. Mount Adora Hospital & Diagnostic Center, Mirboxtula, Nayashark, Sylhet-3100.
20. Amit X. Garg, MD; Neill K. J. Adhikari, MD; Heather McDonald, MSc; M. Patricia Rosas-Arellano, MD, PhD; P. J. Devereaux, MD; Joseph Beyene, PhD; Justina Sam, BHSsc; R. Brian Haynes, MD, PhD: “Effects of Computerized Clinical Decision Support Systems on Practitioner Performance and Patient Outcomes”, JAMA. 2005;293(10):1223-1238.doi:10.1001/jama.293.10.1223.

Index Terms
Keywords

Relevant Attribute (RA) Data Structure, Word Tagging, Synonym Parent Tree, Reference Tag, Decision Tree.