

Heart Diseases Prediction System using ML

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Abstract: Machine learning proves to be effective in assisting in making decisions and predictions from the large quantity of data produced by the health care industry. This project aims to predict future heart disease by analysing data of patients which classifies whether they have heart disease or not using machine learning algorithm. Machine Learning techniques can be a boon in this regard. Even though heart disease can occur in different forms, there is a common set of core risk factors that influence whether someone will ultimately be at risk for heart disease or not. By collecting the data from various sources, classifying them under suitable headings & finally analysing to extract the desired data we can say that this technique can be very well adapted to do the prediction of heart disease.

Keywords: Machine Learning

REFERENCES

- [1]. Seckeler MD, Hoke TR. The worldwide epidemiology of acute rheumatic fever and rheumatic heart disease. Clin Epidemiol. 2011;3:67.
- [2]. Weng SF, Reys J, Kai J, Garibaldi JM, Qureshi N. Can machine-learning improve cardiovascular risk prediction using routine clinical data? PLoS ONE. 2017;12(4):e0174944.
- [3]. Ramalingam VV, Dandapath A, Raja MK. Heart disease prediction using machine learning techniques: a survey. Int J Eng Technol. 2018;7(2.8):6847
- [4]. Avinash Golande, Pavan Kumar T, Heart Disease Prediction Using Effective Machine Learning Techniques, International Journal of Recent Technology and Engineering, Vol 8, pp.944-950,2019.
- [5]. T.Nagamani, S.Logeswari, B.Gomathy, Heart Disease Prediction using Data Mining with Mapreduce Algorithm, International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 22783075, Volume-8 Issue-3, January 2019.
- [6]. Internet source [Online]. Available (Accessed on May 1 2020): <http://acadpubl.eu/ap>
- [7]. H. Jindal, S. Agrawal, R. Khera, R. Jain and P. Nagrath, "Heart disease prediction using machine learning algorithms", ICCRDA 2020, IOP Conf. Series: Materials Science and Engineering, 1022 (2021) 012072, DOI:10.1088/1757-899X/1022/1/012072.
- [8]. P. Motarwar, A. Duraphe, G. Suganya, M. Premalatha, "Cognitive Approach for Heart Disease Prediction using Machine Learning", International Conference on Emerging Trends in
- [9]. Information Technology and Engineering (ic-ETITE), IEEE, 2020, DOI: 10.1109/icETITE47903.2020.242.
- [10]. V. Sharma, S. Yadav, M. Gupta, "Heart Disease Prediction using Machine Learning
- [11]. Techniques", 2nd International Conference on Advances in Computing, Communication Control and Networking (ICACCCN), IEEE, 18-19 Dec. 2020, DOI: 10.1109/ICACCCN51052.2020.9362842.
- [12]. A. Nikam, S. Bhandari, A. Mhaske, S. Mantri, "Cardiovascular Disease Prediction Using Machine Learning Models" IEEE Pune Section International Conference (PuneCon), IEEE, 16-18 Dec. 2020, DOI: 10.1109/PuneCon50868.2020.9362367.
- [13]. S. Mohan, C. Thirumalai, G. Srivastava, "Effective Heart Disease Prediction Using Hybrid Machine Learning Techniques", IEEE Access, Special Section on Smart Caching, Communications, Computing and Cybersecurity for Information-Centric Internet of Things, 2019, DOI: 10.1109/ACCESS.2019.2923707.

- [14]. D. Kumar, S. Kumar, K. Arumugaraj, V. Mareeswari, "Prediction of Cardiovascular Disease Using Machine Learning Algorithms", IEEE International Conference on Current Trends toward Converging Technologies, Coimbatore, 2018.
- [15]. A. Gavhane, G. Kokkula, I. Pandya, K. Devadkar, "Prediction of Heart Disease Using Machine Learning", Proceedings of the 2nd International conference on Electronics, Communication and Aerospace Technology, IEEE Conference, 2018.
- [16]. Minas A. Karaolis, Joseph A. Moutiris, Demetra Hadjipanayi, Constantinos S. Pattichis, Assessment of the Risk Factors of Coronary Heart Events Based on Data Mining With Decision Trees, IEEE Transactions on Information Technology in Biomedicine, Vol. 14, N2010
- [17]. Sonali. B. Maind, Priyanka Wankar, " Research Paper on Basic of Artificial Neural Network", International Journal on Recent and Innovation Trends in Computing and Communication (IJRITCC), Vol. 2, No. 1, January 2014, pp. 96-100.
- [18]. Harleen Kaur , Siri Krishan Wasan and Vasudha Bhatnagar, "The Impact of Data Mining Techniques on Medical Diagnostics ", Data Science Journal, Vol. 5, October 2006, pp. 119126.
- [19]. R. Dybowski and V. Gant, "Clinical Applications of Artificial Neural Networks", Cambridge University Press, 2007