IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.301
Volume 3, Issue 7, April 2023

Diagnosis of Heart Disease using Machine Learning Algorithms

K. Pazhanivel[1], A. Pravin[2], S. Ramji[3], M. Sakthiganesh[4], M. Saravanan[5]
Assistant Professor, Department of Computer Science Engineering[1]
Students, Department of Computer Science and Engineering[2,3,4,5]
Anjalai Ammal Mahalingam Engineering College, Thiruvarur, India

Abstract: *The diagnosis of heart disease using machine learning algorithms is a promising field that has the potential to improve the accuracy and efficiency of diagnoses. This paper discusses four machine learning algorithms, including Support Vector Machines (SVM), Decision Trees, and Logistic Regression, that can be used for heart disease diagnosis. These algorithms work by identifying the most relevant features related to heart disease, pre-processing the dataset, and fine-tuning the models for optimal performance. Once well-performing models are obtained, they can be deployed for real-time diagnosis. The use of machine learning algorithms for heart disease diagnosis can provide faster, more accurate, and more efficient diagnoses, leading to better patient outcomes and reduced healthcare costs. However, careful hyper parameter tuning and dataset preprocessing are required to ensure optimal performance. Overall, the use of machine learning algorithms for heart disease diagnosis shows great promise and has the potential to revolutionize the way heart disease is diagnosed and treated.*

Keywords: Heart Disease Prediction

REFERENCES

[1] Wang, Y., Huang, Y., & Lan, Y. (2021). A survey of machine learning applications in the diagnosis of heart disease. Journal of Healthcare Engineering, 2021, 1-14.
[2] Zhang, Y., Liu, S., Hou, Y., & Li, Y. (2020). Diagnosis of heart disease using machine learning algorithms: a systematic review. Frontiers in Cardiovascular Medicine, 7, 1-10.
[3] Kavakiotis, I., Tsave, O., Salifoglou, A., Maglaveras, N., & Vlahavas, I. (2017). Machine learning and data mining methods in diabetes research. Computational and Structural Biotechnology Journal, 15, 104-116.
[4] Xu, Y., & Xie, L. (2019). Diagnosis of heart disease based on improved decision tree algorithm. Journal of Healthcare Engineering, 2019, 1-8.
[5] Gandomi, A. H., Mousavi, S. M., & Kiani, N. A. (2019). Heart disease diagnosis using logistic regression, naïve bayes, and decision tree methods. Applied Soft Computing, 83, 1-13.
[6] Sarker, S. H., & Saleem, M. A. (2020). Diagnosis of heart disease using machine learning algorithms. International Journal of Computer Science and Network Security, 20(2), 33-40.
[7] Dey, N., Ashour, A. S., & Bhatt, C. (Eds.). (2019). Smart healthcare: Applications and services for emerging markets. Springer.
[8] Kuhn, M., & Johnson, K. (2013). Applied predictive modeling. Springer Science & Business Media.
[9] Venkatesh, R., C. Balasubramanian, and M. Kaliappan. "Development of Big Data Predictive Analytics Model for Disease Prediction using Machine learning Technique." Journal of medical systems 43.8 (2019): 272.
[10] Narasimhan, B., and A. Malathi. "Artificial Lampyridae Classifier (ALC) for coronary artery heart disease prediction in diabetes patients." International Journal of Advance Research, Ideas and Innovations in Technology 5.2 (2019): 683-689.
[11] Alizadehsani, Roohallah, et al. "Machine learning-based coronary artery disease diagnosis: a comprehensive review." Computers in biology and medicine (2019): 103346.
[12] Golande, Avinash. "Heart Disease Prediction Using Effective Machine Learning Techniques." International Journal of Recent Technology and Engineering (IJRTE) 8.1 (2019).

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.301
Volume 3, Issue 7, April 2023

[13] Darmawahyuni, Annisa, Siti Nurmaini, and Firdaus Firdaus. "Coronary Heart Disease Interpretation Based on Deep Neural Network." Computer Engineering and Applications Journal 8.1 (2019): 1-12.