

# Analyzing Heart Disease Dataset using a Classification Algorithm

Mr. Yogesh Patil<sup>1</sup> and Dr. Priya Chandran<sup>2</sup>

Bharati Vidyapeeth's Institute of Management and Information Technology, Navi Mumbai, India

**Abstract:** *One of the most prevalent ailments today is heart disease, and for many healthcare professionals, early detection of this condition is essential to both protecting their patients from it and saving lives. For the classification of the Heart Disease dataset in this research, a comparison examination of several classifiers was carried out in order to accurately identify and forecast instances with few variables. This research shows the comparative study of classification algorithms on the Heart disease dataset.*

**Keywords:** KNN, Naïve Bayes algorithm, Classification, Heart disease prediction

## REFERENCES

- [1]. V.Manikandan and S.Latha, "Predicting the Analysis of Heart Disease Symptoms Using Medical Data Mining Methods", International Journal of Advanced Computer Theory and Engineering, Vol. 2, Issue. 2, 2013.
- [2]. V. Chaurasia, "Early Prediction of Heart Diseases Using Data Mining," Caribbean Journal of Science and Technology, vol. 1, pp. 208–217, 2013..
- [3]. M. Jabbar, P. Chandra, and B. Deekshatulu, "CLUSTER BASED ASSOCIATION RULE MINING FOR," Journal of Theoretical & Applied Information Technology, vol. 32, no. 2, pp. 196–201, 2011.
- [4]. T. J. Peter and K. Somasundaram, "AN EMPIRICAL STUDY ON PREDICTION OF HEART DISEASE USING CLASSIFICATION DATA MINING TECHNIQUES," 2012.
- [5]. S. B. Patil and Y. S. Kumaraswamy, "Extraction of Significant Patterns from Heart Disease Warehouses for Heart Attack Prediction," International Journal of Computer Science and Network Security (IJCSNS), vol. 9, no. 2, pp. 228–235, 2009.
- [6]. P. Chandra, M. . Jabbar, and B. . Deekshatulu, "Prediction of Risk Score for Heart Disease using Associative Classification and Hybrid Feature Subset Selection," in 12th International Conference on Intelligent Systems Design and Applications (ISDA), 2012, pp. 628– 634.
- [7]. K. Srinivas, K. Raghavendra Kao, and A. Govardham, Analysis of coronary heart disease and prediction of heart attack in coal mining regions using data mining techniques," in The 5th International Conference on Computer Science & Education, 2010, pp. 1344– 1349.
- [8]. C. Ordonez, "Association rule discovery with the train and test approach for heart disease prediction.," IEEE transactions on information technology in biomedicine : a publication of the IEEE Engineering in Medicine and Biology Society, vol. 10, no. 2, pp. 334–43, Apr. 2006
- [9]. D. S. Chaitrali and A. S. Sulabha, "A Data Mining Approach for Prediction of Heart Disease Using Neural Networks," International Journal of Computer Engineering & Technology (IJCET), vol. 3, no. 3, pp. 30–40, 2012.
- [10]. R. Chitra and V. Seenivasagam, "REVIEW OF HEART DISEASE PREDICTION SYSTEM USING DATA MINING AND HYBRID INTELLIGENT TECHNIQUES," Journal on Soft Computing (ICTACT), vol. 3, no. 4, pp. 605–609, 2013.
- [11]. H. Takci, "Improvement of heart attack prediction by the feature selection methods," *Turkish Journal of Electrical Engineering and Computer Sciences*, vol. 26, pp. 1–10, 2018
- [12]. N. A. Sundar, P. P. Latha, and M. R. Chandra, "PERFORMANCE ANALYSIS OF CLASSIFICATION DATA MINING TECHNIQUES OVER HEART DISEASE DATA BASE," International Journal of Engineering Science & Advanced Technology, vol. 2, no. 3, pp. 470– 478, 2012.
- [13]. X.-Y. Gao, A. A. Ali, H. S. Hassan, and E. M. Anwar, "Improving the accuracy for analyzing heart diseases prediction based on the ensemble method," *Complexity*, vol. 2021, Article ID 6663455, 10 pages, 2021.

- [14]. R. Spencer, F. Thabtah, N. Abdelhamid, and M. Thompson, "Exploring feature selection and classification methods for predicting heart disease," *Digital Health*, vol. 6, Article ID 2055207620914777, 2020.
- [15]. K Nearest Neighbors - Classification - Data Mining Map [https://www.saedsayad.com/k\\_nearest\\_neighbors.html](https://www.saedsayad.com/k_nearest_neighbors.html).
- [16]. Dimitoglou, G., Adams, J. A., & Jim, C. M. (2012). Comparison of the C4. 5 and a Naïve Bayes classifier for the prediction of lung cancer survivability. arXiv preprint arXiv:1206.1121.
- [17]. Predicting Diabetes by cosequencing the various Data Mining Classification Techniques P. Radha , Dr. B. Srinivasan, IJISSET - International Journal of Innovative Science, Engineering & Technology, Vol. 1 Issue 6, August 2014.
- [18]. Boutayeb, A., Boutayeb, S. The burden of non communicable diseases in developing countries. *Int J Equity Health* 4, 2 (2005). <https://doi.org/10.1186/1475-9276-4-2>.