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Prediction of Heart Diseases Using SVM

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Abstract: *The advancement in technology has encouraged the researchers to develop software for assisting doctors in making decision without consulting the specialists directly. The software development exploits the potential of human intelligence like reasoning, making decision, learning (by experiencing) and lots of others. Various automated systems and tools like Arterial Spin Labelling (ASL) imaging, Support Vector Machine (SVM) ASL-MRI, biomarkers, Natural language processing (NLP), Brain-computer interfaces (BCIs), and various algorithms helps to decrease errors and control disease progression. The computer assisted diagnosis, decision support systems, expert systems and implementation of software may assist physicians to attenuate the intra and inter-observer variability.The Support Vector Machine Model may be a supervised machine learning technique which is predicated on the statistical theory. Support Vector Machines have been successfully applied to variety of classification and regression tasks. SVM basically works because the linear separator between two data points to spot two different classes within the multidimensional environment. SVM uses a really big set of non-linear features that's task-independent. They have an ingenious thanks to prevent over-fitting. They have a really clever thanks to use an enormous number of features without requiring nearly the maximum amount computation as seems to be necessary. The prime objective of this approach is to maximise the margin between the classes and to attenuate the space between the hyper plane points.Heart disease is that the normal term utilized in the health industry.The meaning of the heart malady is that the heart isn't working legitimately or regularly. In the medical terminology the heart attack may be a condition where the availability of the blood to the organs of the body is blocked then it'll result into the blood clot. Now-a-days there are numerous heart diseases like arterial coronary Disease, Congestive coronary failure and Bad Heart Rhythms etc. There are numerous numbers of individuals who are affected by the heart diseases. The heart diseases may or might not have the symptoms before it attacks the people. So, we'd like to predict the heart diseases for the people it effects or not. Now-a-days such a lot number of individuals is died suddenly thanks to the heart attack because the life sort of the people is modified rapidly. The support vector machine is a supervised learning method. Support Vector Machine can predict the heart disease supported the given factors like sex, age, pulse etc. The Support Vector Machine technique is more accurate and sensitive than compared to other algorithms.This study aims to spot predictors of medication adherence in HF patients.*

Keywords: Support Vector Machine, Heart diseases, Symptoms, Machine learning, Prediction, etc.

REFERENCES

[1] Application of Support Vector Machine for Prediction of Medication Adherence in Heart Failure Patients Youn-Jung Son, RN, PhD,1 Hong-Gee Kim, PhD,2 Eung-Hee Kim, ME,2 Sangsup Choi, PhD,2 and Soo-Kyoung Lee, RN, Doctoral Candidate2
[2] V. N. Vapnik, The Natural of Statistical Learning Theory, Springer, New York, NY, USA, 1995.
[3] V. N. Vapnik, Statistical Learning Theory, Wiley, New York, NY, USA, 1998.
[4] Jesmin Nahar, TasadduqImama, Kevin S. Tickle, Yi-Ping Phoebe Chen, Association rule mining to detect factors which contribute to heart disease in males and females, Elsevier, 2013.

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[5] Ms. Ishtake S.H,Prof. Sanap S.A., "Intelligent Heart Disease Prediction System Using Data Mining Techniques", International J. of Healthcare & Biomedical Research,2013.

[6] Monali Dey, Siddharth Swarup Rautaray, Study and Analysis of Data mining Algorithms for Healthcare Decision Support System, International Journal of Computer Science and Information Technologies(2014).

[7] Rashedur M. Rahman, Farhana Afroz, Comparison of Various Classification Techniques Using Different Data Mining Tools for Diabetes Diagnosis, Journal of Software Engineering and Applications, 2013.

[8] Rich Caruana and Alexandru Niculescu-Mizil, (2006), An Empirical Comparison of Supervised Learning Algorithm, 23rdInternational Conference on Machine Learning, Pittsburgh.

[9] S. Ghumbre, C. Patil, and A. Ghatol, Heart disease diagnosis using support vector machine,Proceedings of the International Conference on Computer Science and Information Technology (ICCSIT '11), Pattaya, Thailand, 2011.

[10] K. Srinivas, B. Kavitha Rani and Dr. A. Govrdhan, Applications of Data Mining Techniques in Healthcare and Prediction of Heart Attacks‖ International Journal on Computer Science and Engineering (2010).

[11] S.Krishnan J. Geetha S, "Forecast of Heart Disease Using Machine Learning Algorithms",First International Conference on Innovations in Information and Communication Technology ,2019

[12] K.G.Dinesh, K A.garaj, K.D.Santhosh, V M.eswari. "Forecast of Cardiovascular Disease Utilizing Machine Learning Algorithms", 2018 International Conference on Current Trends towards Converging Technologies,2018.

[13] Y. Khourdifi, M. Bahaj, "Coronary illness Prediction and Classification Using Machine Learning Algorithms Optimized by Particle Swarm Optimization and Ant Colony Optimization", International Journal of Intelligent Engineering and Systems, Vol.12,No.1,2019.

BIOGRAPHY

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