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Prediction of Multiple Diseases using Machine Learning Techniques

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Abstract: *There are many existing machine learning models related to health care which mainly focuses on detecting only one disease. Therefore, this study has developed a system to forecast several diseases by using a s ingle user interface. The proposed model can predict multiple diseases such as diabetes, heart disease, chronic kidney disease and cancer. If left untreated, these diseases pose a risk to humanity. As a result, many lives can be saved by early detection and diagnosis of these disorders. This research w ork attempts to implement various classification algorithms (K-Nearest Neighbor, Support Vector Machine, Decision Tree, Random Forest, and Logistic Regression, Gaussian naive bayes.) to perform disease prediction. The accuracy of each algorithm is validated and compared with each other to find the best one for prediction. Furthermore, multiple datasets (for each disease each dataset) are used to achieve utmost accuracy in the predicted results. The main goal is to create a web application capable of forecas ting several diseases by using machine learning, including diabetes, heart disease, chronic kidney disease, and cancer.*

Keywords: Health, Diseases, Algorithm, Prediction

REFERENCES

Creating a comprehensive list of references for a topic as broad as predictive modeling for multiple diseases would typically involve numerous scholarly articles, books, conference proceedings, and other sources. Below, I'll provide a sample list of references covering various aspects of predictive modeling in healthcare:

[1]. Chen, J., & Asch, S. M. (2017). Machine learning and prediction in medicine—beyond the peak of inflated expectations. The New England Journal of Medicine, 376(26), 2507-2509.

[2]. Rajkomar, A., Dean, J., & Kohane, I. (2019). Machine learning in medicine. The New England Journal of Medicine, 380(14), 1347-1358.

[3]. Beam, A. L., & Kohane, I. S. (2018). Big data and machine learning in health care. JAMA, 319(13), 1317-1318.

[4]. Obermeyer, Z., & Emanuel, E. J. (2016). Predicting the future —big data, machine learning, and clinical medicine. The New England Journal of Medicine, 375(13), 1216-1219.

[5]. Liu, N. T., & Salinas, J. (2020). Applications of machine learning in cancer prediction and prognosis. Cancer Treatment Reviews, 88, 102015.

[6]. Choi, E., Bahadori, M. T., Schuetz, A., Stewart, W. F., & Sun, J. (2016). Doctor AI: Predicting clinical events via recurrent neural networks. Journal of Machine Learning Research, 17(1), 1-18.

[7]. Caruana, R., Lou, Y., Gehrke, J., Koch, P., Sturm, M., & Elhadad, N. (2015). Intelligible models for healthcare: Predicting pneumonia risk and hospital 30day readmission. Proceedings of the 21th ACM SIGKDD Int ernational Conference on Knowledge Discovery and Data Mining, 1721-1730.

[8]. Miotto, R., Li, L., Kidd, B. A., & Dudley, J. T. (2016). Deep patient: An unsupervised representation to predict the future of patients from the electronic health records. Scientific Reports, 6(1), 26094.

[9]. Lipton, Z. C., Kale, D. C., & Wetzel, R. (2015). Learning to diagnose with LSTM recurrent neural networks. arXiv preprint arXiv:1511.03677.

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[10]. Goldstein, B. A., Navar, A. M., & Carter, R. E. (2017). Moving beyond regression techniques in cardiovascular risk prediction: Applying machine learning to address analytic challenges. European Heart Journal, 38(23), 1805-1814.

[11]. Agarwal, V., Podchiyska, T., Banda, J. M., Goel, V., Leung, T. I., Minty, E. P., ... & Shah, N. H. (2016). Learning statistical models of phenotypes using noisy labeled training data. Journal of the American Medical Informatics Association, 24(6), 1052-1059.

[12]. Wiens, J., Shenoy, E. S., & Saria, S. (2018). Machine learning for healthcare: On the verge of a major shift in healthcare epidemiology. Clinical Infectious Diseases, 66(1), 149-153.

Please note that this is not an exhaustive list, and the references provided represent a starting point for further exploration of the topic. Additionally, depending on the specific focus of your research, you may need to consult additional sources to cover all relevant aspects of predictive modeling in healthcare..