

Heart Failure Prediction Technique using Complex Event Processing

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Abstract: According to the WHO (World Health Organization) chronic diseases such as cancer, coronary heart disease, diabetes mellitus type 2, and chronic obstructive pulmonary diseases are among the world's most common diseases constitute because of this about 60% of all deaths occur in world. Here, we propose new health monitoring techniques to the prediction of heart failures. In this, we propose edge-computing based Complex Event Processing (CEP) techniques with the Remote Patient Monitoring (RPM) for the remote healthcare applications. This approach is based on the CEP it is combined with the statistical approach. For the extraction heart defects of patients C4.5 algorithm and, to the prediction of heart failure multilayer perceptron (MLP) model will be consider. First phase is to collect health parameters. Second phase is to process the collected data using an analysis rule. This proposed system continuously monitors heart patient and it predicts heart failures strokes based on the related symptoms. When a critical condition occurs then it alters patients and cardiologist.

Keywords: Heart Failures Prediction, C4.5, WHO, Remote Patient Monitoring and Multilayer Perceptron. etc.

REFERENCES

- [1] F.Alqadah, Ju. Hu and H. F. Alqadah, "Biclustering Neighborhood Based Collaborative Filtering Method for Top-n Recommender Systems", Knowledge Information System, Springer, [2015].
- [2] A. Javari and M. Jalili, "A Probabilistic Model to Resolve Diversity Accuracy Challenge of Recommendation Systems", Knowledge Information System, volume-44, no.3, [2015].
- [3] Y.Rao, N. Zhang, and H. Zou, "Adaptive Ensemble with Trust Networks and Collaborative Recommendations", Knowledge Information System, volume. 44, No. 3, PP. 663–688, [2015].
- [4] Gu.Xu, Do. Wang and Sh. Deng, "Exploring User Emotion in Microblogs for Music Recommendation", Expert Systems with Applications, Volume-42, Page No.:9284–9293, Elsevier, [2015].
- [5] ShuiGuang Deng Jian Wu and Zhao Hui Wu, "Trust-based personalized service recommendation a network perspective", JOURNAL OF COMPUTER SCIENCE AND TECHNOLOGY, Volume-29, Page No-69–80, Springer, [2014].
- [6] S. Dhillon, Hsiang Fu Yu, and I. S. Dhillon, "Parallel Matrix Factorization for Recommender Systems", Knowledge and Information Systems, Springer, [2014].
- [7] Ha. Park, M. Ishteva, and R.Kannan, "Bounded Matrix Factorization for Recommender System", Knowledge Information System, Springer, [2014].
- [8] Shuiguang Deng, Guandong Xu, and Longtao Huang, "Social Network Based Service Recommendation With Trust Enhancement", Expert Systems with Applications, Volume 41, Issue 18, Pages 8075-8084, Elsevier-15, [2014].
- [9] Kuan Zhang, EePeng Lim, and David Lo, "Mining Indirect Antagonistic Communities from Social Interactions", Knowledge and Information Systems, Volume 35, Issue 3, pp 553–583, Springer, [2013].

- [10] BalazsHidasi and DomonkosTikk, “Initializing matrix factorization methods on implicit feedback databases”; Universal Computer Science, vol. 19, no. 12, [2013].