

Disease Prediction Using Data Mining

Isanaka Sai Venkatesh Reddy^{*1}, S. Magesh Kumar², S P. Chokkalingam³

¹UG Scholar, Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences, Chennai, India

²Associate Professor, Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences, Chennai, India

³Professor, Saveetha School of Engineering, Saveetha Institute of Medical and Technical Sciences, Chennai, India

^{*1}venky11.05.1999@gmail.com, ²mageshkumars.sse@saveetha.com, ³chomas75@gmail.com

Article Info

Volume 81

Page Number: 5490 - 5493

Publication Issue:

November-December 2019

Abstract

Order based Data mining plays significant job in different social insurance administrations. In social insurance province, significant as well as testing task are to analyze wellbeing circumstance as well as appropriate therapy of ailment at the advance arrange. Some of different ailments that can be analyzed advance also, can be attend to at the beginning period. while infections. The customary methods for diagnosing thyroid infections relies upon clinical assessment as well as number of tox screen. Important assignment in order to recognize malady conclusion at advance phases accompanied by high precision. Data mining strategies take part in a significant job in social insurance area for creating decision, illness finding as well as giving best therapy to sufferer effortlessly. Sickness categorization is an significant job. Motivation behind investigation is to predict the illness utilizing distinctive arrangement procedures

Article History

Article Received: 5 March 2019

Revised: 18 May 2019

Accepted: 24 September 2019

Publication: 26 December 2019

Keywords: classification model, Data mining tools, Decision tree, Naïve Bayes, illness diseases

1. Introduction

Finding of Thyroid Disease is dull and troublesome errands. The analysis thyroid sickness in the conventional manner incorporates clinical assessment and the many blood tests. In any case, at that point the principle task is to conclusion the ailment at right on time steps with more exact rate. Within Medicinal area, Information mining do a pivotal job on determination in illness. Information Mining gives numerous characterization systems for the forecast of malady precision. The assembled tolerant information gathered from numerous social insurance association is helpful for the hazard factors investigation for numerous illnesses/

In social insurance and medicinal, the applications which are on Data mining are advantageous as well as significant. Huge measure information assembled from social insurance association has no authoritative worth except if changed into most valuable data as well as awareness, that can be useful in cost monitoring, expanding benefits, as well as excellent preservation of tolerant healthcare. Categorization Algorithms is significant practice in the area of information mining, will be useful for basic leadership of some genuine universal issues.

2. Literature Survey

Considered current the prior programmed instruments for analysis of ailment at the simpler

organize in a productive path. In addition measurements learn on distinctive assessment in execution and furthermore examinations with patterns as well as later advancements are contemplated.

They have suggested surface planted division i.e both similar renditions of a program for Fine Needle Aspiration Cytology pictures is significant initial phase in recognizing a completely mechanized PC Aided Design solution. Program is created over MPI variant for abusing PC assets, for example, PC bunches.

They have planned for building up an AI classifier utilizing AIS for finding of wellbeing stage as well as of the suggested category for ability analysis suggested category effectively improved the illness organ malady distinguishing proof procedure.

They have put forward Nomem Novum preparing finding model for the of the illness. They points on building up common model for recognizing every sort of illness. Goal of the paper is to illness detection

by utilizing diverse fake neural organize calculation possess diverse structure, attributes as well as precision.

3. Proposed Work

The illness Dataset chosen from UCI information archive website. Database comprises of illness victim files. The victim files is having various qualities portrayed on the informational collection depiction and various information mining systems were applied to get the predication of illness disease.

Over social insurance administrations information mining procedure is for the most part utilized for settling on choice, ailment curing and providing better cure to patients at comparately low cost. Classification of thyroid ailment doan significant task in the forecast of disease. Dimensionality decrease might be done as a future work with the goal of number of tox screen the illness will be diminished as well as furthermore time used for analyze malady.

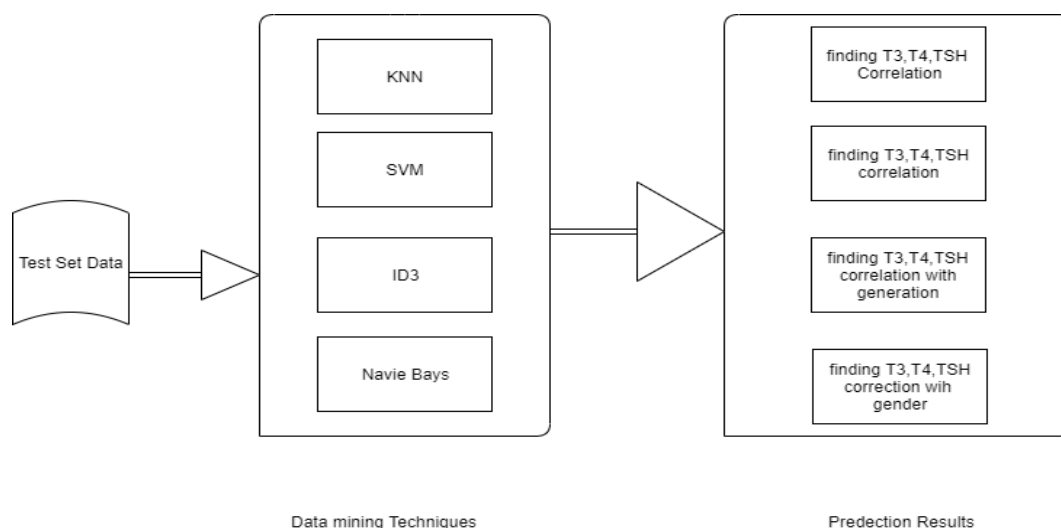


Figure 1: Categorization structure for illness prediction

4. Results and Discussion

Our proposed system aims at predicting the illness using data mining techniques. KNN algorithm is

compared with the proposed algorithm. The experimental results proved that any particular disease can be predicted with our proposed system. The graph also clearly depicts the same. (Fig.2)

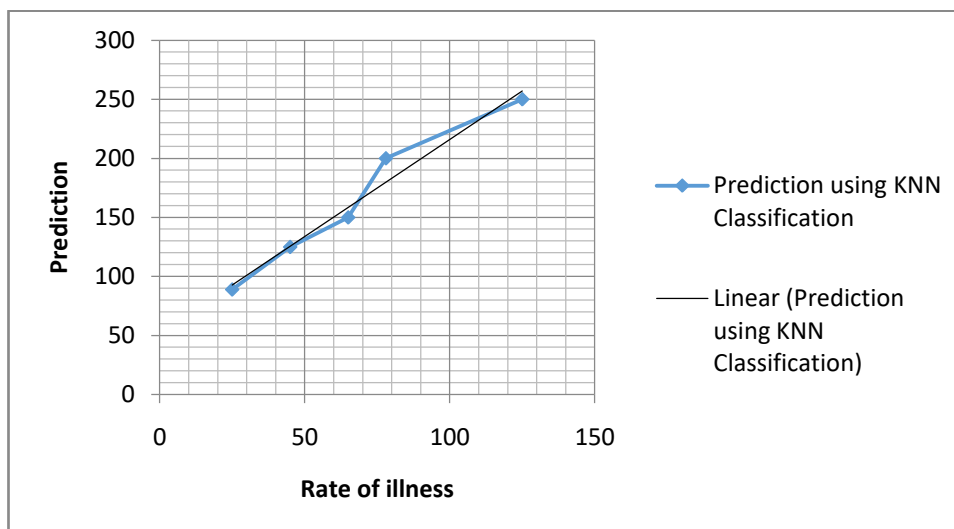


Figure 2: Illness Prediction

5. Conclusion

Consequently overview is useful to distinguish to anticipate the illness issue in prior arrange utilizing information mining tools. Data Mining characterization calculations were utilized to cure the ill issues and sends diverse stage of exactness for every tools. Strategies used to limit uproarious information of the patient's information from the information bases. Data mining Algorithms, Different calculation outputs depend over fast, precision as well as execution of structure and prize for cure. Also these characterization of powerful information were finds the treatment to illness patients with best cost as well as encourages administration.

References

- [1] Roshan Banu D, and K. C. Sharmili "A Study of Data Mining Techniques to Detect Thyroid Disease" International Journal of Innovative Research in Science, Engineering and Technology (Vol. 6, Special Issue 11, September 2017)
- [2] Irina Ioni Nă and Liviu Ioni Nă" Prediction of Thyroid Disease Using Data Mining Techniques" The Classification Technique for Talent Management using SVM, (ICCEET), 978-1-4673-0210-4/12, pp. 95963, 2017
- [3] Khushboo Taneja, Parveen Sehgal, Prerana "Predictive Data Mining for Diagnosis of Thyroid Disease using Neural Network" International Journal of Research in Management, Science & Technology (E-ISSN: 2321-3264) Vol. 3, No. 2, April 2016
- [4] Hanung Adi Nugroho, Noor Akhmad Setiawan, Md. Dendi Maysanjaya," A Comparison of Classification Methods on Diagnosis of Thyroid Diseases" IEEE International Seminar on Intelligent Technology and Its Applications, 2017
- [5] M. N Das, Brojo Kishore Mishra, Shreela Dash," Implementation of an Optimized Classification Model for Prediction of Hypothyroid Disease Risks" 2017 IEEE Conference on Big Data and Analytics (ICBDA)
- [6] Rasitha Banu, G.— "Predicting Thyroid Disease using Linear Discriminant Analysis (LDA) Data Mining Technique", IJTRA
- [7] Izdihar Al-muwaffaq and Zeki Bozkus" MLTDD: USE OF MACHINE LEARNING TECHNIQUES FOR DIAGNOSIS OF THYROID GLAND DISORDER" Proceeding of Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2017
- [8] Umadevi S, Dr. Jeen Marseline K.S, "Applying Classification Algorithms to Predict Thyroid Disease" International Journal of Innovative Research in Science, Engineering and Technology (Vol. 6, Special Issue 10, September 2017)

- [9] Dr. Srinivasan B, Pavya K “Diagnosis of Thyroid Disease: A Study” International Research Journal of Engineering and Technology Volume: 03 Issue: 11 | Nov - 2016
- [10] K. Rajam and R. Jemina Priyadarsini”A Survey on Diagnosis of Thyroid Disease Using Data Mining Techniques”, IJCSMC, Vol. 5, Issue. 5, May 2016, pg.354– 358.
- [11] Rouhani Modjtaba and Mansouri Kamran “Multi- classification approach for detecting Thyroid attacks”, International Journals Pharm Bio Sci, pp. - 4(3), July 2017.
- [12] Gurmeet Kaur, Er. Brahmaleen Kaur Sidhu, — Comparison of anfis neural network with several other anns and svm for diagnosing hepatitis and thyroid diseases ,IRJET Volume1, Issue 11, July-2016
- [13] Saeed Shariati and Mahdi Motavalli Haghighi, Proposing Neural Network Efficient Training Model for Thyroid Disease Diagnosis In Proceedings of IEEE IACSIT 2017, pages 526-528.
- [14] Aytürk Keleş and Keleş, Ali. "ESTDD: Expert system for thyroid diseases diagnosis." International Research Journal of Engineering and Technology (IRJET) Volume: 03 Issue: 11 | Nov -2017 34.1 (2017): 242-246
- [15] <http://archive.ics.uci.edu/ml/machine-learning-databases/thyroiddisease/hypothyo-id>.