

Data Mining Applications In Healthcare

Jacinta Joji Anchanattu ¹, Sneha Sara Santhosh ², Sherin Mary Andrews ³

¹BCA Student, SAINTGITS College of Applied Sciences, Kottayam, Kerala, India

²BCA Student, SAINTGITS College of Applied Sciences, Kottayam, Kerala, India

³ASS.PROF, SAINTGITS College of Applied Sciences, Kottayam, Kerala, India

Abstract - Data mining has been used by many companies intensively and extensively. Data mining is becoming increasingly common, if not increasingly vital, in healthcare. Both parties involved in the healthcare sector will benefit greatly from data mining applications. Data mining, for instance, can help health insurers identify fraud and abuse, customer experience management decisions are taken by healthcare companies, efficient therapies & best practices are established by doctors & patients will receive better and less expensive facilities for healthcare. The enormous quantities of data produced by healthcare are too complicated and complex. Voluminous by conventional methods to processed and analyzed. Data Mining Provides the methodology and technique for transforming these data mounds to useful data for decision making. This article addresses data mining applications in healthcare. It discusses about data mining applications in particular. Data mining and its healthcare applications in major areas, such as the assessment of effectiveness treatment, hospital management, management of customer relations, fraud and abuse detection. It also provides a best example of a healthcare system. Application for data mining involving the detection of risk factors connected with the Diabetes onset. Finally, the article focus the constraints of data mining and addresses those future paths.

Key Words: Data Mining, Healthcare management, Healthcare Applications, Predictive modeling

1. INTRODUCTION

It is possible to describe data mining as the process of finding Previously unknown patterns in databases and trends using the data to build predictive models. Alternatively, it can be described as the data collection, discovery and construction process using vast data models, stores previously overlooked trends. Data mining is not new, and has been intensively used for credit scoring, and widely by financial institutions, detection and fraud, advertisers, for targeted marketing and fraud detection. Another reason is that the vast quantities of data produced by transactions in healthcare are too complicated and complex. Voluminous for conventional production and analysis methodologies. Data mining can enhance decision-making by making decisions, discovering trends and patterns in broad quantities complex data. Such analysis has gradually become more complex. Important

because the need has been increased by financial pressures by Healthcare organizations are expected to make decisions on the basis of the medical and financial data collection. Insights obtained from data mining can affect prices, sales, and operational costs and effectiveness while ensuring a high quality of treatment.

2. LITERATURE REVIEW

• Data Mining

Data mining techniques can be widely categorized based on data mining. Description and visualisation of what they can do are, clustering and association, grouping and calculation, Which is modelling predictive. Description and visualization will greatly contribute, In order to understand a data set, especially a big one, detecting and detecting hidden patterns in data, particularly complicated information containing complex and non-linear information relationships. Typically they are carried out before modeling, Data comprehension is attempted and reflected in the Methodology of the CRISP-DM.

• Healthcare management

Data mining applications can be developed to help healthcare management in order to improve, identify and track states of chronic illness and high-risk. Plan effective treatments for patients, and decrease the number of admissions and lawsuits from hospitals. Data mining can be used to analyze vast amounts of data. Data and statistics to check for trends that may suggest Bio-terrorist threats. The Lightweight Emergency Response Epidemiological Advanced Detection one such initiative is the structure (LEADERS). Members of the past several disease outbreaks have been uncovered.

• Healthcare Applications

There is enormous scope for applications in data mining healthcare. Generally, these can be grouped together as the measurement of the efficacy of treatment, healthcare management, management of consumer relationships, fraud detection and molestation. More advanced mining of medical data, such as DNA micro-arrays lies predictive medicine and review outside this paper's view. Applications of data mining will built the measure efficacy of the medical treatments. By comparing causes, signs, and contrasting them,

data mining as well as the treatment courses can offer and study of which the action courses prove to be successful.

3. CONCLUSIONS

The authors hope, eventually, that this paper will make a Contribution to literature on data mining and healthcare Train and It is also hoped that this text would assist all Healthcare stakeholders enjoy the benefits of Data mining in healthcare.

ACKNOWLEDGEMENT

This paper is presented as a result of combined effort from us, along with the sincere guidance from our guide Asst. Prof. Sherin Mary Andrews.

REFERENCES

1. Milley, A. (2000). Healthcare and data mining. *Health Management Technology*, 21(8), 44-47.
2. Dakins, D.R. (2001). Center takes data tracking to heart. *Health Data Management*, 9(1), 32-36
3. Relles, D. Ridgeway, G. & Carter, G. (2002). Data mining and the implementation of a prospective payment system for inpatient rehabilitation.
4. *Health Services & Outcomes Research Methodology*, 3(3-4), 247-266.
5. Trybula, W.J. (1997). Data mining and knowledge discovery. *Annual Review of Information Science and Technology*, 32, 197-229