**Journal of Neonatal Surgery**
***ISSN(Online): 2226-0439***
***Vol. 14, Issue 22s (2025)***
*https://www.jneonatalsurg.com*

OPEN ACCESS

# Harnessing Textual Mining for Web-Based Health Monitoring in Healthcare: A Comprehensive Review

**Shripad Shrikant Bhide[1], Dr. Imran Baig Mirza[2]**

[1]Assistant Professor, Department of Master of Computer Application, P.E.S. Modern College of Engg, Pune-05. India.
Email: [1]shripadbhide@gmail.com

[2]Assistant Professor, Department of Computer Applications, Poona College of Arts, Science & Commerce, Pune-01. India.
Email ID: [2]mailtoimirza@gmail.com

Cite this paper as: Shripad Shrikant Bhide, Dr. Imran Baig Mirza, (2025). Harnessing Textual Mining for Web-Based Health Monitoring in Healthcare: A Comprehensive Review. *Journal of Neonatal Surgery*, 14 (22s), 1-8.

## ABSTRACT

Web-based health monitoring is useful to improve timely transmission of health-related information of remotely located patients to concern people. This system comprises a broad range of technologies and methodologies that uses the internet and connected devices to monitor and manage health related data remotely. The rapid growth of digital health-related content has created unprecedented opportunities to apply technique like text mining for monitoring and analyzing healthcare trends. Textual mining is nothing but an advanced natural language processing (NLP) approach which enables the extraction of actionable insights from unstructured web-based data. Such data may be collected from social media posts, health forums, and online articles. (Heterogeneous data). This paper provides a comprehensive review of how textual mining is applied in web-based health monitoring. It examines current methodologies, real-world applications, challenges, and future directions.Our findings highlights its potential to enhance early disease detection, patient sentiment analysis, healthcare delivery and public health decision-making Text mining has become a powerful tool for processing unstructured textual data in healthcare. This review explores its application in web-based health monitoring, focusing on methods, case studies, and key challenges. We identify gaps in leveraging large-scale data from online platforms for predictive healthcare insights and propose future directions.

**Keyword:** *Text Mining, Web Based Health Monitoring System (WBHMS), Supervised, Unsupervised, Hybrid..*

## 1. INTRODUCTION

The healthcare industry is a data-rich environment, generating massive amounts of information, including electronic health records, administrative reports, and various benchmarking findings. Whatever data generated in the healthcare industry is very sensitive & confidential, so decision making is the big & challenging task. Currently text mining tools are remarkable ones in this industry. These tools are becoming angel in prediction of disease, giving optimised treatment, relationship building with the patient etc.

In text mining, transformation of unstructured textual data into implementable conclusions, thereby enhancing healthcare monitoring, decision-making, patient care, and public health interventions. This function of text mining enriches web-based health monitoring systems. As reports are generated from heterogeneous sources, finding or reaching to the proper conclusion is somewhat troublesome. Hence text mining play a important role. Its integration with web-based platforms improves the efficiency, effectiveness, and responsiveness of healthcare systems in managing and leveraging textual information for various applications.

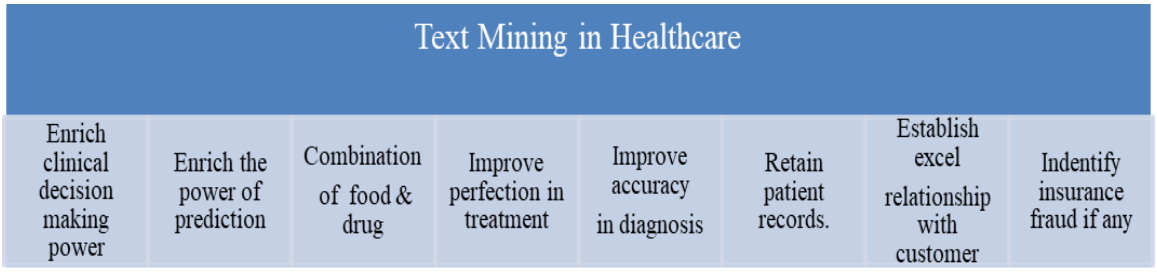


**Fig.1 Use of Text Mining in Healthcare Industry**

### 1.1 Text mining in Web-Based Health Monitoring

*"Web-based health monitoring enables real-time tracking of disease outbreaks, patient sentiment, and healthcare service feedback, offering actionable insights."*

As Text mining and web-based monitoring systems goes hand in hand. Mining tools strengthen the required parameters of web based health monitoring system given in the diagram.

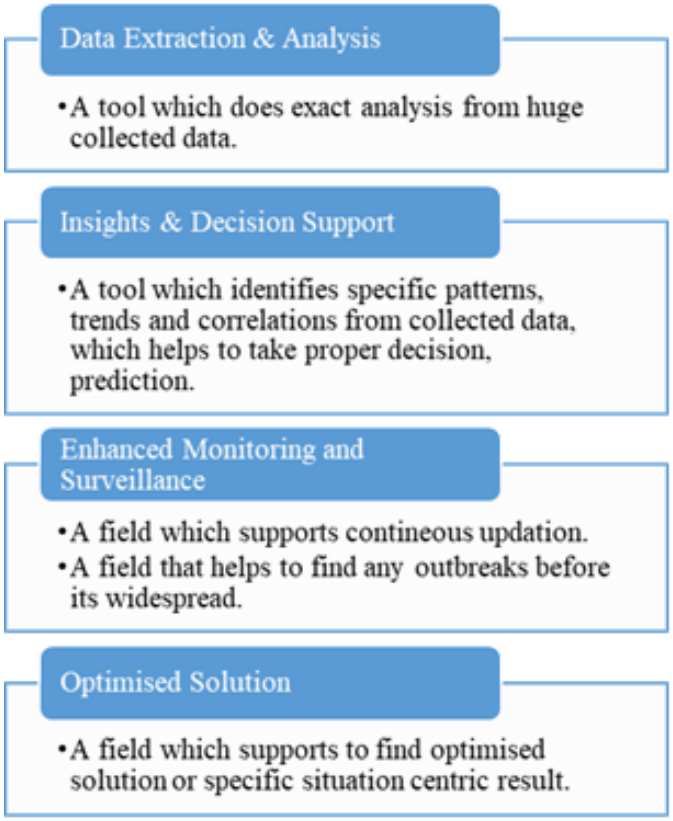


**Fig. 2 Benefit of Text Mining in WBHMS**

## 2. OBJECTIVES

*"This paper reviews recent advancements in text mining techniques for web-based health monitoring, highlights challenges, and suggests future research opportunities."*

The quick growth of the internet as well as social media has drastically transformed how individuals share and access health information. Twitter, Facebook, platforms of social media as well as health forums, blogs have become repositories of valuable health-related data. Textual mining, a branch of NLP, offers powerful tools to harness this information for monitoring trends, understanding patient behaviors, and improving healthcare delivery.

This review focuses on the the current methodologies and tools employed in this domain, use of textual mining for healthcare data collected from the web, major challenges and limitations as well as the future possibilities for this field.

## 3. METHODOLOGY

**3.1 Study Design:-** It is the observational research type.

**3.2 Data Collection**:- To provide a comprehensive review, we conducted a systematic search of research papers, journals, conference proceedings and articles related to textual mining and web-based health monitoring. Keywords included "textual mining," "health monitoring," "natural language processing," and "web-based healthcare." Studies published between 2015 and 2024 were prioritized. The selected studies were categorized into: types of text mining algorithm, how these algorithms are useful in various disease surveillance, how they strengthen the WBHMS.

3.3 Tools and Techniques:- There are variety of text mining algorithms which are useful in the healthcare industry. But here we are focusing on those algorithms which are useful in prediction of diseases, patient triaging, categorizing treatment based on current patient condition etc.

Basically Text Mining algorithms having 3 major categories –

1) Supervised 2) Unsupervised 3) Hybrid approach


**Fig. 3 List of Text Mining (ML)Algorithms.**

In the healthcare industry, **supervised algorithms** are more extensively used than unsupervised algorithms. In this type, algorithm is trained from collected labelled data. This trained algorithm is applied on remaining data for prediction purpose.

In **unsupervised** type no any learning process is involved. This technique is useful to find out undefined patterns or clusters which occur within datasets. It is exploratory technique.

A **hybrid approach of supervised and unsupervised algorithms** in machine learning combines the strengths of both paradigms. In some complex problems neither supervised nor unsupervised addressed effectively where hybrid approach is the only solution. This integration leverages labelled data (supervised learning) and unlabelled data (unsupervised learning) to enhance the model's learning capabilities and improve accuracy. The hybrid approach is particularly useful in real-world scenarios where labelled data is limited, and patterns in unlabelled data can be utilized to improve model performance.

## 4. LITERATURE REVIEW

### 4.1 Text Mining in Healthcare

1) The article "Text Mining in Healthcare: Applications and Opportunities" (published in the *Journal of Healthcare Information Management)* discusses extracting valuable insights using text mining from unstructured clinical data.

Key applications include:

1. **Clinical Decision Support**: By analyzing clinical notes and electronic health records (EHRs) , identify pattern and provide actionable insights for diagnosis, treatment, and patient management, text mining can be useful.
2. **Pharmacovigilance**: Text mining aids in monitoring drug safety by analyzing adverse event reports and biomedical literature to identify potential drug interactions or safety signals.
3. **Drug Discovery and Repurposing**: Mining scientific literature helps discover associations between drugs, diseases, and genes, accelerating drug development and repurposing.
4. **Healthcare Quality Improvement**: Analyzing patient feedback and social media discussions uncovers insights into patient experiences, guiding improvements in care delivery.

The paper also highlights challenges such as the complexity of medical language, data privacy concerns, and the need for regulatory compliance. Overcoming these challenges is essential to fully harness the potential of text mining in healthcare applications.

2) The paper titled "A Concise Survey on Datasets, Tools and Methods for Biomedical Text Mining" by R. Johnsi, G. Bharadwaja Kumar, and Tulasi Prasad Sariki offers an in-depth overview of the biomedical text mining field, with a focus on datasets, tools, and methodologies. It is published in the International Journal of Applied Engineering Research (2022).

This paper aims to provide insights into the resources available for biomedical researchers, particularly in the area of text mining applied to bioinformatics.

In their survey, the authors categorize the tools and methods used for mining biomedical texts, including techniques for information extraction, knowledge discovery, and automated document categorization. The paper also explores various datasets that are crucial for mining biomedical data. Also helps for practitioners in understanding available resources and their effectiveness in the biomedical domain.

3) The study "Using text mining techniques to extract prostate cancer predictive information (Gleason score) from semi-structured narrative laboratory reports in the Gauteng province, South Africa" (Cassim et al., 2021) explores text mining functionality which automates extraction of the Gleason score (GS) from narrative biopsy reports for prostate cancer (PCa) diagnoses. Prostate cancer is a major health concern in South Africa, and the Gleason score plays a crucial role in assessing tumor aggressiveness.

The application of text mining to automate the extraction of the Gleason score (GS) from narrative biopsy reports for prostate cancer (PCa) diagnoses. Prostate cancer is a leading health concern in South Africa, and the Gleason score, which evaluates tumour aggressiveness. Gleason score is a critical factor in treatment decisions.

The researchers developed new text mining algorithm that successfully extracted the Gleason score from over 1000 biopsy reports sourced from both the public and private healthcare sectors. Their algorithm comprises various steps like data acquisition, pre-processing, feature extraction, and classification. The evaluation metrics used to measure the algorithm's performance included precision, recall, and F-score, which achieved excellent results, with F-scores reaching as high as 1.00 for the validation set

The study demonstrates how text mining can streamline the extraction of critical medical data from unstructured text, improving the efficiency and accuracy of clinical workflows in prostate cancer diagnosis. Moreover, this method can assist in monitoring disease progression and facilitating earlier detection of high-risk cases.

4) The study titled "Classification of Drug Effectiveness Based on Patient's Condition Using Text Mining with K-Nearest Neighbour" leverages text mining to predict drug effectiveness based on patient data. This research applies the K-Nearest Neighbour (KNN) algorithm, which calculates the proximity between new patient data and existing data to classify the drug's effectiveness. 77.86% as accuracy is achieved after splitting from total dataset, 70% is used for training and 30% is for testing purpose. When more training data is used, the model's performance improves, demonstrating the importance of data volume for accuracy.

This paper highlights how text mining techniques can be used for analysing drug reviews, clustering effectiveness categories like "highly effective" to "ineffective," helping in personalized medicine

Classification of medicines based on their similarities is done using Naive Bayes classifier- a new algorithm based on K-nearest neighbour (KNN) algorithm.

5) The paper "Text-mining-based feature selection for anticancer drug response prediction" explores the drug response in cancer treatments and to identify relevant features using predictive text mining techniques. The study focuses on selecting predictive features from biomedical literature using text mining, which is then used in machine learning models to predict drug sensitivity. Specifically, the paper uses text mining-based gene sets along with various methods for feature selection, such as variance-based selection and correlation-based methods, to identify genes that correlate with drug responses.

This approach demonstrates how text mining can be applied to large-scale biological data to improve the prediction of cancer treatment efficacy, using gene expression data and machine learning algorithms like Random Forest, Elastic Net, and deep learning models

**4.2 Supervised Algorithms in Healthcare**

6) The paper "Diabetes Prediction Model Using Data Mining Techniques" by Mamta Bansal and Rashi Rastogi explores the use of data mining techniques for diabetic prediction. The study applies four machine learning algorithms— Logistic Regression, Support Vector Machine (SVM), Random Forest, and Naive Bayes—using a dataset sourced from Kaggle. Among these, Logistic Regression achieved 82.46% accuracy, which is highest.

The methodology involves pre-processing the dataset to remove missing values and identifying patterns, followed by evaluating the performance of each algorithm using metrics like confusion matrices, sensitivity, and overall accuracy. The study emphasizes that early prediction of diabetes is crucial for better treatment and prevention of complications like heart disease and kidney damage.

This research focuses use of machine learning in healthcare, especially for providing accurate diagnoses as well as reducing the workload on medical experts. The findings submit that Logistic Regression might be particularly suitable for similar prediction models

7) "Prediction of Diabetes using Logistic Regression and Ensemble Techniques" by Priyanka Rajendra and Shahram Latifi This study explores the use of logistic regression combined with ensemble techniques to predict diabetes. By utilizing datasets like the PIMA Indians Diabetes dataset and another from Vanderbilt University, the research demonstrates that feature selection and ensemble techniques, such as max voting and stacking, significantly enhance model performance. Logistic regression alone achieved solid results, but when integrated with ensemble approaches, the accuracy reached up to 93% for certain datasets. The study emphasizes the importance of data pre-processing, feature selection, and advanced model strategies for improving predictive outcomes in medical contexts.

8) The paper titled **"Prediction of Diabetes Using Classification Algorithms"** by **Deepti Sisodia** and **Dilip Singh Sisodia** investigates the performance of various classification algorithms to predict diabetes. It primarily uses the Pima Indians Diabetes Dataset (PIDD), which contains female patient's data and eight numeric attributes. The study evaluates the predictive performance of algorithms such as **Naive Bayes, Support Vector Machine (SVM), Decision Tree,** and using metrics like precision, accuracy, recall, and F1-score.

**Key Findings**

- **Naive Bayes** results an accuracy of approximately 76.3%, demonstrating strong performance, especially in handling imbalanced data.
- **Decision Tree** performed slightly lower, with results influenced by the chosen splitting criteria and pruning strategies.
- **SVM** demonstrated robust classification ability with well-defined hyper planes.

The research emphasizes the importance of pre-processing (e.g., normalization and handling missing values) and algorithm selection in improving diabetes prediction. The experiments were conducted using the WEKA software for machine learning.

9) The paper titled "Disease Prediction Using Data Mining" by Vasant Mesrtry, Somil Koul, Vivek Solavande, Ankush Gaonkar, and Amit Dubey explores the application of data mining techniques for disease prediction. It primarily emphasizes the use of classification methods like decision trees and Naive Bayes algorithms to predict diseases based on patient data, such as symptoms, demographic information, and medical history. These data mining techniques can analyze large datasets and identify patterns that can help predict various diseases, improving healthcare outcomes by providing early diagnosis.

This approach is especially valuable in medical fields where timely intervention can greatly enhance patient outcomes. The system described in the paper suggests developing web applications that integrate these algorithms to assist doctors and healthcare professionals in making informed decisions based on predictive models

10) The paper titled "Classification of Medicines Using Naïve Bayes Classifier" was published in the Research Journal of Pharmacy and Technology in May 2018. It focuses on applying the Naïve Bayes classification algorithm to categorize medicines based on their chemical properties. The study highlights a binary classification system for medical applications, specifically differentiating between drugs for fever and typhoid.

Key features utilized for classification include:

- Relative molecular mass
- Hydrogen bond donors and acceptors
- Number of flexible rotation bonds
- Polar surface area
- Hydrophobic constant

A dataset of 120 drug samples was created from data sourced from the U.S. National Library of Medicine. The Naïve Bayes classifier was employed to compute probabilities for assigning medicines to disease categories based on these properties, demonstrating its effectiveness in a binary medical classification context

**4.3 Unsupervised Algorithms in Healthcare**

11) The paper titled *Data Clustering Application in Medicine* by Mantas Lukauskas and Tomas Ruzgas, published in 2022, provides a review of clustering algorithms and their applications within the medical field. It highlights how clustering, a type of unsupervised learning, is used to uncover hidden patterns in patient data that might not be obvious through traditional analysis. Clustering algorithms are particularly useful in medicine for grouping patients based on similar characteristics or diseases, which helps in providing more tailored treatments.

In medicine, clustering is applied in various ways, including the classification of diseases like breast cancer, Parkinson's disease, Alzheimer's, and heart disease. Furthermore, for processing and analysing unstructured data such as medical images and text documents, clustering techniques are widely used. Resultant data can then be grouped to facilitate faster and more

accurate diagnosis.

The paper emphasizes the broad potential of clustering algorithms like K-means, DBSCAN, and hierarchical clustering in handling complex medical data, leading to more efficient and effective healthcare delivery.

12) The paper "Cluster-based Text Mining for Extracting Drug Candidates for the Prevention of COVID-19 from Biomedical Literature" by Ahmad Afif Supianto, Rizky Nurdiansyah, Chia-Wei Weng, and colleagues, focuses on leveraging cluster-based text mining to identify potential drug candidates for COVID-19 treatment. The study integrates various methods such as:

1. **Text Mining with BERT (Bidirectional Encoder Representations from Transformers):** Biomedical text embeddings were used to extract meaningful associations between diseases and drugs from large datasets.
2. **Clustering using TF-IDF:** Features extracted from biomedical texts were clustered to reveal patterns in disease-drug relationships.
3. **Drug Candidate Extraction:** Data from PubChem and DrugBank were analyzed for potential drug candidates, validated using docking simulations with AutoDock Vina.

The research demonstrated that clustering-based text mining outperformed non-clustering approaches in accuracy and relevance of drug discovery. This method identified potential phytochemicals and drugs for COVID-19 prevention, showcasing the power of computational methods in accelerating biomedical research.

### 4.4 Hybrid Approach in Healthcare

13) The paper "Prediction of Heart Disease by Clustering and Classification Techniques" by Reetu Singh, E Rajesh , published in the *International Journal of Computer Sciences and Engineering* (May 2019) explores hybrid methods to predict heart disease effectively by combining clustering (K-means) and classification (Logistic Regression) techniques. The study utilized datasets of heart disease to analyse features such as cholesterol levels and patient age. By applying pre-processing techniques like normalization, the study improved the clustering process to enhance prediction accuracy. Then logistic regression was used for classification based on the clustered data, enabling better distinction of risk levels.

**Following table shows how text mining algorithms strengthen the WBHMS.**

| Sr. No. | Paper Title | Description | Conclusion | Inference |
|---|---|---|---|---|
| 1. | Jawandhiya R. Data mining techniques in the healthcare industry. J Theor Comput Sci. 2023;9(2). | Focused on various data mining techniques that are transforming the healthcare industry. | The integration of data mining techniques in healthcare has enhanced the potential to transform patient care by optimizing resource allocation and enabling more informed decision-making. | Data mining techniques play a vital role in web-based health monitoring. |
| 2. | Patel S, Patel H. Survey of data mining techniques used in healthcare domain. Int J Inf Sci Technol (IJIST). 2016 Mar;6(1/2). | This paper examines various data mining techniques, including classification, clustering, and association, while also highlighting related studies on analyzing and predicting human diseases. | Data mining holds immense potential to efficiently and effectively utilize healthcare data for predicting various types of diseases. | Data Mining techniques supports to improve disease prediction |
| 3. | Gupta S, Saluja K, Goyal A, Vajpayee A, Tiwari V. Comparing the performance of machine learning algorithms using estimated accuracy. Measurement: Sensors. 2022 Dec;24:100432. | Algorithms like SVM, DART, CART, Random Forest, Linear Regression and Neural Networks are compared on given dataset for accuracy. | Classification and Regression Tree is found with more accuracy. | Process to select accurate algorithm. |

| | | | | |
|---|---|---|---|---|
| 4. | An Q, Rahman S, Zhou J, Kang JJ. A comprehensive review on machine learning in healthcare industry: classification. J of Medicine. 2023 Apr 22. doi: 10.3390/s23094178. | We evaluated the effectiveness of machine learning algorithms in enhancing time series healthcare metrics for heart rate data transmission, focusing on accuracy and efficiency. | With rise in healthcare data, machine learning will be essential in improving patient outcomes and advancing medical research. | Useful in prediction of critical diseases. |
| 5. | Javaid M, Haleem A, Singh RP, Suman R, Rab S. Significance of machine learning in healthcare: features, pillars and applications. Int J Intell Networks. 2022;3:58-73. | The paper concludes that machine learning will play a vital role in developing clinical decision support systems, disease detection, and personalized treatment approaches to achieve optimal patient outcomes. | How the algorithms are helpful in various processes of healthcare industry<br>i.e. Algorithms improve the overall efficiency of healthcare systems. | Machine learning models can identify patients at higher risk of developing preventable chronic diseases such as heart disease and diabetes. |
| 6. | Ono S, Goto T. Intro. to supervised machine learning in clinical epidemiology . Ann Clin Epidemiol 2022;4(3) : 63–71. | How algorithms helps to improve patient care by developing clinical observation methods. | The integration of algorithms with human cognitive abilities is essential for the successful application of machine learning in medicine. | Machine learning algorithms strengthen the ability of prediction & decision making |
| 7. | Identifying diseases symptoms and general rules using supervised and unsupervised machine learning Sogandi F.Sci Rep. 2024 Aug 2;14(1): 17956. doi: 10.1038/ s 41598-024-69029-8. PMID: 39095606 | Comparison of disease symptoms using mining algorithms | Early disease prediction greatly improves healthcare quality and helps prevent serious health complications. | Algorithms<br>analyze data to examin disease symptoms using AR and predictive modeling. |

## 5. CONCLUSION & FUTURE SCOPE

As enormous amount of heterogeneous data is generated from various resources in healthcare industry, managing this data is becoming a rigid task. Collected data is only useful when meaningful information is extracted after processing it. Use of text mining in WBHMS became a worship to handle such complex situations.

Data mining algorithms plays a dynamic role in WBHMS. To analyze diverse data in medical field and to enhance prediction, diagnosis, and effective treatment, machine learning algorithms viz. supervised, unsupervised, and reinforcement learning, are used. Accuracy, sensitivity, specificity are the few performance parameters of prediction, diagnosis or treatment to be analyzed.

Diagnostic algorithms helps to confirm diseases, predictive algorithms estimate disease possibility (likelihood) and Machine Learning algorithms supports to detect patterns for early diagnosis and treatment strategies.

This paper speaks about strength of WBHMS using text mining algorithms for accuracy in prediction, treatment of diseases. Future work of this research is to visualize and compare drug properties using text mining algorithms to get optimized solution to improve effective treatment.

## REFERENCES

[1] Jawandhiya R. “Data mining techniques in the healthcare industry.” Journal of Theoretical & Computational Science. 2023;9(2).

[2] Patel S, Patel H. “Survey of data mining techniques used in healthcare domain” . International Journal Information Sciences Techniques (IJIST). 2016 Mar;6(1/2).

[3] Gupta S, Saluja K, Goyal A, Vajpayee A, Tiwari V. “Comparing the performance of machine learning algorithms using estimated accuracy.” September 2022 Measurement Sensors 24(1):100432

[4] An Q, Rahman S, Zhou J, Kang JJ. “A comprehensive review on machine learning in healthcare industry: classification, Restrictions, Opportunities and Challenges” Journal of Medicine. 2023 Apr 22. doi: 10.3390/s23094178.

[5] Javaid M, Haleem A, Singh RP, Suman R, Rab S. “Significance of machine learning in healthcare: features, pillars and applications.” International Journal Intelligent Networks. 2022;3:58-73.

[6] Sachiko Ono, Tadahiro Goto “Introduction to supervised machine learning in clinical epidemiology.” Ann Clin Epidemiol 2022;4(3) : 63–71.

[7] Fatemeh Sogandi “Identifying diseases symptoms and general rules using supervised and unsupervised machine learning” .Sci Rep. 2024 Aug 2;14(1):17956. doi: 10.1038/s41598-024-69029-8.PMID: 39095606

[8] Uzma Raja ,Tara Mitchell ,Timothy Day, James Michael Hardin “Text mining in healthcare. Applications & opportunities ” February 2008 Journal of healthcare information management: JHIM 22(3):52-6

[9] R. Johnsi, G. Bharadwaja Kumar, Tulasi Prasad Sariki “A Concise Survey on Datasets, Tools and Methods for Biomedical Text Mining” International Journal of Applied Engineering Research ISSN 0973-4562 Volume 17, Number 3 (2022) pp. 200-217

[10] Naseem Cassim , Michael Mapundu, Victor Olago, Deborah K Glencross "Using text mining techniques to extract prostate cancer predictive information (Gleason score) from semi-structured narrative laboratory reports in the Gauteng province, South Africa" November 2021, BMC Medical Informatics and Decision Making 21(1), DOI: 10.1186/s12911-021-01697-2

[11] Deny Haryadi; Dewi Marini Umi Atmaja; Arif Rahman Hakim; Wina Witanti “ Classification of Drug Effectiveness Based on Patient's Condition Using Text Mining With K-Nearest Neighbor” IEEE 2022 International Conference.

[12] Grace Wu, Arvin Zaker, Amirhosein Ebrahimi, Shivanshi Tripathi, Arvind Singh Mer “Text-mining-based feature selection for anticancer drug response prediction” Bioinformatics Advances, Volume 4, Issue 1, 2024

[13] Rashi Rastogi a b, Mamta Bansal “Diabetes prediction model using data mining techniques” Science Direct 5th December 2022

[14] Priyanka Rajendra, Shahram Latifi “ Prediction of Diabetes using Logistic Regression and Ensemble Techniques” Comouter Methods and Programs in Biomedicine October 2021

[15] Deepti Sisodia a, Dilip Singh Sisodia b “ Prediction of Diabetes using Classification Algorithms” ScienceDirect 8th June 2018

[16] Vasant Mesrtry ,Somil Koul, Vivek Solavande, Amit Dubey “Disease Prediction Using Data Mining” ResearchGate August 2022

[17] Baisani Indraja , Annapurani Panaiyappan Kumarappan, "Classification of Medicines Using Naïve Bayes Classifier" Research Journal of Pharmacy and Technology in May 2018

[18] Mantas Lukauskas , Tomas Ruzgas “ Data Clustering Application in Medicine ” ResearchGate New Trends in Mathematical Science March 2022

[19] Ahmad Afif Supianto, Rizky Nurdiansyah, Chia-Wei Weng "Cluster-based Text Mining for Extracting Drug Candidates for the Prevention of COVID-19 from Biomedical Literature" SSRN Electronic Journal · April 2022

[20] Reetu Singh, E Rajesh , "Prediction of Heart Disease by Clustering and Classification Techniques" International Journal of Computer Sciences and Engineering (May 2019)

..