

Original Article

# A Survey on Artificial Intelligence Techniques for Disease Prediction in Healthcare

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Received Date: 18 December 2025

Revised Date: 24 December 2025

Accepted Date: 29 December 2025

**Abstract:** The rapid advancement of medical data and the ever-increasing need for effective healthcare services are causing a major shift in the healthcare industry. Clinical reports, wearable devices, medical imaging, and electronic health records all generate massive amounts of data that traditional data analysis tools may struggle to process. Artificial intelligence (AI) is a powerful technology that may help medical professionals analyze complex healthcare data and improve the quality of diagnosis and treatment. In particular, the use of AI, which encompasses ML, DL, and NLP, has shown immense promise in the realm of disease prediction and the discovery of previously unseen patterns in patient data. Early detection of cardiovascular disease, diabetes, cancer, and neurological problems also allows for better treatment results and more timely decision-making. This in-depth analysis of AI's role in healthcare covers a wide range of disease prediction algorithms, including CNNs, SVMs, Decision Trees, RF, and ANN. Integration of AI with the internet of things (AIoT) for health monitoring is also included in the research, along with diagnosis and prognosis. It highlights the fundamental challenges of data quality, privacy, and explainability of AIoT models in healthcare equipment.

**Keywords:** AI Techniques, Healthcare Industry, Disease Prediction, Deep Learning, Patient Care, Physical Health.

## I. INTRODUCTION

A revolution is taking place in the healthcare industry. The rising overall cost of healthcare and the growing scarcity of medical personnel are the main causes of this transformation. Due to these, the healthcare industry is looking for innovative products based on information technology and procedures that can reduce expenditures and provide remedies to these escalating challenges[1]. As healthcare data in the form of medical imaging, wearable technology, and electronic health records and diagnostic reports continues to expand in volume, the data analysis methods utilized in the past are not usually sufficient to handle and integrate such high volumes of information effectively[2]. The use of artificial intelligence (AI), particularly deep learning (DL) and machine learning (ML), has demonstrated high potential in identifying meaningful patterns within medical datasets and, thus, helps healthcare professionals diagnose and identify diseases more efficiently and effectively.

Among the most promising AI applications in healthcare is disease prediction, which is aimed at revealing any potential health risks and diagnosing diseases early in their progress. Early diagnosis of diseases like heart disease, diabetes, cancer and neurological disorders can greatly enhance the results of treatment and lower mortality rates[3]. Prediction models can be based on AI, which examines the data of patients, such as symptoms, medical history, lab results, and images, and then discovers latent patterns that could indicate the possibility of a disease. Using these high-level analytical features, AI systems are able to nudge physicians to make informed and timely decisions, and this leads to better patient care and management of health care.

The prediction of diseases has been attempted using a range of AI methods, including both modern DL models (like ANN, CNN, and RNN) and older ML techniques (such as Decision Trees, SVM, Random Forest, NB, and KNN). Clinical evaluation and disease prediction have both benefited from the application of these algorithms to various medical datasets [4]. Cloud computing, the IoT, and big data analytics are just a few of the technologies that have recently helped enhance disease prediction systems by expanding their capabilities.

Nevertheless, several critical issues, such as model interpretability, privacy & security, and data quality, and access to trustworthy medical information. It is necessary to combat these issues to make AI applications in medical settings safe and efficient[5]. Hence, the proposed survey aims at overviewing and examining the numerous AI methods employed to predict diseases in healthcare, showcasing the latest advances, current shortcomings, and prospective areas of research in this domain.

## A. Structure of the Paper

This paper is structured in the following way. Section II explains how AI can be used in healthcare. Section III has different AI methods applied to predict the disease. Section IV emphasizes the difficulties of incorporating AI. Section V is the



review of the existing literature pertaining to AI-based disease. Lastly, Section VI concludes by outlining possible future research directions.

## II. ARTIFICIAL INTELLIGENCE IN HEALTHCARE

The application of AI technologies like ML and NLP, to improve patient monitoring, diagnosis, treatment planning, and administration is known as AI in healthcare.



**Figure 1: AI in Healthcare**

It is the application of algorithms to medical data that is complex to analyze and provides predictions or recommendations to assist in enhancing patient outcomes through clinical decision-making[6]. AI in healthcare (see Figure 1) seeks to automate the processes, improve patient care, cut down on medical errors, and, more so, enhance the efficiency and effectiveness of healthcare provision.

AI attempts to replicate human thinking in the healthcare industry, it is transforming the way things are done due to the increased amount of health data. Moreover, methods of analysis of this data are also improved and faster [7]. The AI technology in health care has facilitated pharmaceutical firms to accelerate the process of finding new medications, which has accelerated the creation of life-saving medicines [8]. The other problematic area is patient data and diagnostics, which are examples of AI uses.

The number of patients (i.e., medical big data) can be addressed by the medical researchers with the help of AI technologies [9]. With the continued development of AI, its application in the healthcare sector only become more important and necessitate further innovations, contributing to improvements in care quality and accessibility worldwide.

### A. Applications of AI in Healthcare

The following are some uses of medical AI in the healthcare sector:

#### a) AI for Drug Discovery

AI has been a boon to the pharmaceutical industry, allowing them to speed up drug manufacture and develop novel medications. It thus automates the target-identification procedure. Artificial intelligence in healthcare 2021, which analyses off-target compounds, makes medication repurpose easier [10]. Artificial intelligence (AI) drug discovery, therefore, streamlines processes and removes duplication of effort in the healthcare and AI industries.

#### b) AI for Clinical Trials

In a clinical trial, patients are given newly created medications in order to assess their efficacy. Although a lot of money and effort have gone into this, the success rate is quite low. Thus, AI and the healthcare sector have benefited from clinical trial automation. Moreover, AIs and healthcare help in the removal of time [11]. AI in healthcare: an examination of the four data monitoring processes. Additionally, AI-based clinical trials are very accurate and manage large amounts of data. Some of the most popular AI uses in medical clinical trials are listed below:

##### i) Intelligent Clinical Trials

The traditional sequential and linear clinical trials continue to be the greatest level of assurance for new drugs' efficacy and safety. Differentiated and distinct stages of randomized controlled trials (RCTs) are a well-established method that was developed to evaluate pharmaceuticals on the mass market and hasn't altered much over the past few decades.

## B. Clinical Trial Cooperation and Model Sharing

On a scale never seen before in the history of scientific cooperation, scientists from a wide variety of academic disciplines are eager to provide assistance with the COVID-19 response. Scale-based data for sharing policies and code, international cooperation, and localization of applications are necessary for the worldwide effect of AI technologies.

### a) Patient Care

Medical AI companies create solutions that help patients in every manner, and the usage of AI in healthcare influences patient outcomes. Additionally, in order to improve patients' quality of life, clinical intelligence evaluates their medical data and provides feedback. Some crucial clinical intelligence systems that enhance patient care are listed below:

### i) Maternal Care

Identify high-risk mothers and use the following strategy to lower postpartum complications and maternal mortality:

- Promoting better access to crucial care, such as more frequent and sophisticated therapy, for pregnant women through the use of digital technologies.
- The application of digital technology to increase the availability of critical care services, such as more frequent and sophisticated therapy, for pregnant women [12]. Compared to women who give birth in more specialized, higher-acuity facilities, women who opt to give birth in less specialized, less equipped facilities are more likely to have substantial maternal morbidity, especially if they are at high risk of difficulties during labor.

### ii) Healthcare Robotics

Patients can also receive assistance from certain medical robots. Exoskeleton robots aid the mobility and independence of people with paraplegia in particular [13]. The utilization of technology is further illustrated via a smart prosthesis. The bionic limbs, which are covered in bionic skin and include sensors that make them more sensitive and precise than other body parts, may be connected to the human muscles.

### iii) Genetics AI Data-Driven Medicine

Genome sequencing, personalized health status development based on activity and monitoring device data, and healthcare consumers' increasing interest in self-management of their own treatment are all examples of this trend.

## III. AI TECHNIQUES USED FOR DISEASE PREDICTION

The AI approach has improved the capacity to analyze medical data and predict disease early. The AI methods can handle extensive amounts of clinical data, locate concealed patterns, and assist healthcare providers in making correct diagnoses [14]. In order to determine the probability of disease, these methods make use of patient data, including medical records, lab results, imaging data, and genetic information.

In predicting disease, a number of ML and DL techniques are typically employed (see in Figure 2) [15]. The two techniques are different with their own characteristics, as they are selected in accordance with the kind of data and the need for a forecast.

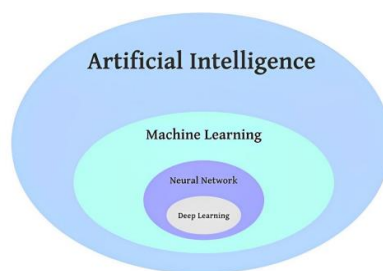


Figure 1: Relationship between AI, ML, NN, and DL

### A. Machine Learning Techniques

ML algorithms have extensively found applications in disease prediction since they have the ability to learn patterns based on past medical records and predict patients [5]. Patient data, including age, BP, cholesterol, symptoms, and diagnostic results, are used to train these algorithms. Examples of common machine learning approaches are:

### a) Decision Tree (DT)

DT is a supervised learning method for making predictions and classifications. Depending on the input attributes, each node in the decision-making tree represents a condition [16]. The model partitions the dataset into smaller subsets based on decision rules until the final prediction is made. The DT are simple to interpret and comprehend, which makes them applicable in medical diagnosis systems. Their main purpose is to forecast conditions like diabetes and heart disease.

*b) Support Vector Machine (SVM)*

An ML model called SVM is mostly used for classification issues. It operates by identifying the best boundary, which is a hyperplane dividing the data into various classes[17]. SVM is effective when dealing with multidimensional medical data and multifaceted data. It is also able to utilize kernel functions to deal with non-linear relationships between variables. The technique is common in the prediction of diseases and the analysis of medical data.

*c) Random Forest (RF)*

The RF ensemble learning model incorporates DT to enhance the precision of predictions. Independent data sets are used to teach each tree in the forest. The ultimate forecast is the average of the forecasts from all the trees, most often determined by majority vote. This technique decreases overfitting and enhances model fidelity. RF is normally applied in prediction of chronic diseases.

*d) K-Nearest Neighbors (KNN)*

KNN is an easy ML model that can be used to classify and predict. It operates by locating the closest data points to an inserted input and classifying it according to the similarity[18]. The algorithm is used to compare data of patients with the data that is already stored to identify the type of the disease. The training of KNN is not complex and can be easily implemented. It has found application in the medical field to classify diseases.

**B. Deep Learning Techniques**

Multiple-layered neural networks are used in the AI field of DL to perform automatic learning of complicated patterns in vast amounts of data. The techniques are particularly helpful for examining CT, MRI, and X-ray images. The most common DL models are:

*a) Artificial Neural Networks (ANN)*

To find patterns in clinical data, an ANN can mimic how the human brain operates. They analyze and interpret the supplied data via linked sheets of neurons. ANN models have the capability of acquiring intricate relations among patient characteristics and disease outcomes[19][20]. They are very common in the prediction of diseases including cancer, diabetes, and heart disease. These networks enhance the accuracy of prediction since weights are adjusted in the training process.

*b) Convolutional Neural Networks (CNN)*

The primary areas of application of CNN are medical analysis of images including tumor detection, lung disease detection, and prediction of skin cancer[21]. CNN models are automatic in the way that they extract significant attributes of an image through the application of the convolution and pooling layers. They are very efficient in the analysis of X-ray, MRI scans, and CT scan images. CNN eliminates manual feature extraction and advances the accuracy of the diagnosis. They have a high image processing power and are therefore common in the current medical imaging systems.

*c) Recurrent Neural Networks (RNN)*

Sequential medical data analysis may be done with recurrent neural networks, such as patient monitoring records or health time series. Unlike traditional NN, RNNs may keep previous inputs in their memory[22]. The capability enables the model to examine time trends. Disease progression and patient health conditions are commonly predicted using RNN models. They may also be used to examine medical data streams and automated health records.

**C. Natural Language Processing (NLP)**

NLP is applied in extracting meaning out of unstructured medical text including doctor notes, clinical reports, and electronic health records[23]. NLP is useful in transforming textual medical data to structured information which can be incorporated by prediction models.

**D. Hybrid AI Models**

In the medicine industry of most contemporary healthcare systems, several AI methods are integrated in order to enhance the accuracy of predictions. For example, ML techniques may be used for preliminary prediction, whereas DL models can be used for medical picture analysis to verify it. Methods applied to predicting the disease as in Table I:

**Table 1: Common AI Techniques Used for Disease Prediction**

AI Technique	Description	Application in Healthcare
Decision Tree	A tree-structured model that makes decisions based on feature values	Diagnosis of heart disease and diabetes
Support Vector Machine (SVM)	Determines the best separation border to classify data.	Cancer detection and medical data classification

Random Forest	Multiple decision trees combined in an ensemble technique	Predicting chronic diseases with high accuracy
K-Nearest Neighbors (KNN)	uses similarity to neighbouring data points to classify situations.	Disease classification using patient history
Artificial Neural Networks (ANN)	Neural network model that learns complex relationships in data	Predicting heart disease and diabetes
Convolutional Neural Networks (CNN)	DL model designed for image recognition	Detection of tumours, lung diseases, and skin cancer
Natural Language Processing (NLP)	Processes unstructured medical text data	Extracting insights from electronic health records

**IV. AIOT FOR HEALTH DOMAIN CHALLENGES**

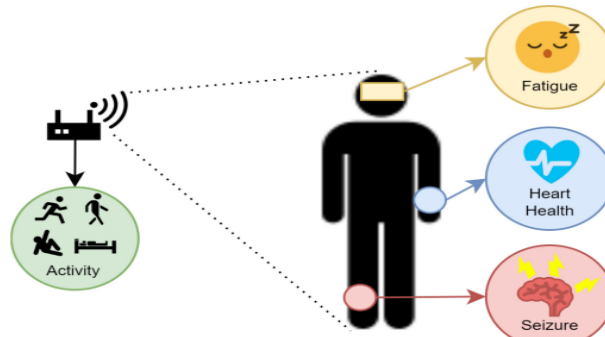
Having identified the elements of the AIoMT, at this point, examine the most critical areas of healthcare that AIoMT can be applied to enhance clinical and patient outcomes. This part start with the basic area of health monitoring, then continue to the use of the same in diagnosis and prognosis. Finally, the literature on the application of the explain ability techniques in the analysis focuses on how AIoMT might enhance general disease knowledge and clinician trust.

**A. Health Monitoring**

Health parameter monitoring, both generally and in relation to the treatment of particular disorders, is the most basic use of AIoT. As shown in Figure. 3, a typical AIoT health monitoring system uses ambient sensors and/or on-body sensors to gather patient data. This data is subsequently processed into meaningful information using machine learning techniques.

*a) Wearable Monitoring*

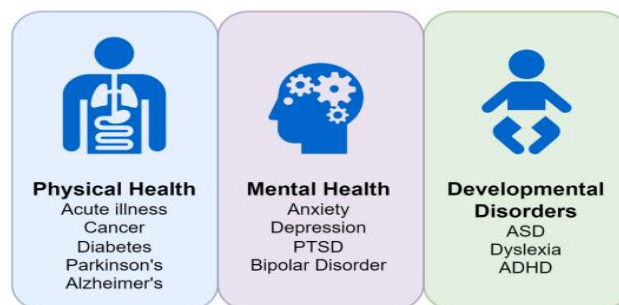
In one recent study, AIoMT system was developed to keep an eye on employees in hot environments and detect heat stroke symptoms [24]. The wearable device developed included humidity and temperature sensors, several PPG sensors, and a 3-axis accelerometer.



**Figure 2: Types of Health Monitoring where AIoMT**

*b) Non-Contact Monitoring:*

The use of environmental monitoring equipment, e.g. camera/radar, can also come in handy in most of the health monitoring cases. A fatigue-monitoring AIoMT system was created in one recent study [25], which combined the data of forehead-worn EEG sensors.



**Figure 3: Health Disorders Diagnosed with AIoMT**

## B. Diagnosis

Health status monitoring is significant in the provision of instantaneous health snapshots and changes of health with time in an individual. Nonetheless, this in itself cannot be used to diagnose health conditions that can be affecting an individual. The sphere of the AIoMT-based diagnosis is aimed at using the latest technology to diagnose a broader scope of mental and physical diseases, developmental disorders, etc., as illustrated in Figure. 4. These three areas are discussed in the subsection of AIoMT-based diagnosis.

### a) Physical Health

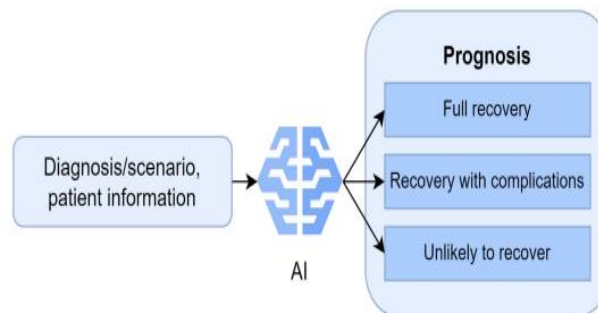
At the start of the pandemic, the timely and numerous investigations, especially those in the field of AI oMT, have focused on the precise diagnosis of Covid-19. In another work, a system of AIoMT to prevent COVID-19 infection early was created in [26]. Heart rate variability (HRV) and resting heart rate (RHR) characteristics were derived from ECG data obtained by Apple Watches.

### b) Mental Health

Modern research has identified a high prevalence of anxiety and depressive disorders [27]. One study that used galvanic skin response sensors, eye tracking, and electroencephalogram (EEG) to identify major depressive disorder proposed a cheap AIoMT.

### c) Development Disorders

Accurate diagnosis of behavioural and developmental issues, especially when dealing with children who are still young, is of critical importance so that early and proper intervention can be made, so that the right kind of support can be offered.



**Figure 4: Example of Prognosis Decision-Making Process Commonly used for Severe Disease Or Injury**

## C. Prognosis Assessment

Health conditions are essential to diagnose and have the opportunity to intervene at an earlier stage and provide a higher level of care. Nevertheless, the harshness and probable outcome of a condition are also worth knowing; this assists clinicians in making a better decision in the direction to be taken, and in the long run, this can help a patient. This is the area of prognosis evaluation. The purpose of prognosis, as shown in Figure. 5, is to forecast the outcome and its severity in a patient who is being hospitalized or receiving ongoing treatment due to an injury or health problem.

### a) Short-Term Outcomes

AIoMT has one crucial use of prognosis outcomes in critical care units, which is predicting serious outcomes. The gravest consequence of such an environment is, evidently, mortality, and prior warning of mortality risk can reduce decision-making power in the course of treatment.

### b) Long-Term Outcomes

Many cohorts also place a high value on long-term results. When a baby is born in preterm birth, the chances of poor neurodevelopmental outcomes are high. Several recent research used AIoMT models to forecast Bayley-III scores between the ages of 18 and 24 months. The model's projections provide the infant's probably neurodevelopmental trajectory, allowing for early intervention when necessary[28][29].

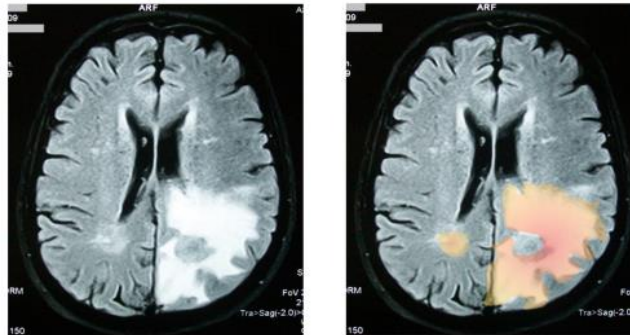
## D. Explainability

AIoMT can also provide the possibility of diagnosing a disease and predicting its outcomes. Nonetheless, the other benefit of the modern AIoMT systems is that they allow explaining clinicians how these predictions were made, thus enhancing the trust toward the instrument and enabling better decision-making. Beyond this, explainable AIoMT systems would be helpful for identifying the biomarkers, risk factors, and other characteristics linked to a certain condition or result, providing even more advantages. This subsequently results in specific medical research to aid the improvement of treatment and prevention

methods of a broad spectrum of conditions and consequences[30]. The development of socially responsible AI also requires explainability because it may be applied to enhance the trustworthiness and dependability of a model.

#### a) Medical Images

One of the primary tasks of explainability methods in the medical field is enhancing trust in AI by clinicians. Explainability has been particularly used in the AIOtM field to explain the decisions made in diagnosis especially where medical images are involved. Another widely used strategy in the literature is the formulation of heat-map methods which indicate the regions taken by a model in its decision as shown in Figure. 6.



**Figure 5: A Tumour-Affected Brain MRI Image (Left) and A Heat Map Technique for Identifying the Tumour (Right)**

#### b) Other AIOtM Data

Other AIOtM data are discrete or time-series values except in medical imaging. When applied to AIOtM systems that process this type of data, explainability approaches are often seen to be practical; this not only helps improve clinician trust in these systems but also aids in the finding of biomarkers.

### E. Lessons

Learned about using AIOtM to track health, it was discovered that already developed wearable devices, such as PPG and ECG, remain popular in the literature, and new approaches to extracting healthcare measurements using these non-invasive wearables are still being discovered. Pilot studies have attempted to improve the accuracy of health data by merging readings from multiple simple devices (e.g., PPG, accelerometers, and sweat sensors) through the process of sensor fusion. Sensor fusion methods have demonstrated encouraging outcomes in non-invasive and wearable healthcare sensors to monitor complicated conditions like heat stress, epilepsy, and diabetes, but on small groups. Good outcomes have also been observed in cases where sensor fusion was employed to integrate wearable sensor and non-contact sensor data to monitor fatigue. These encouraging findings imply that there is a lot of information that can be gleaned out of comparatively more basic physiological measures in which the appropriate AI model is understood to the task.

## V. LITERATURE REVIEW

Recent research demonstrates the growing role of AI in disease prediction, diagnosis and identifies several challenges and limitations. Table II represents a comparative summary of these studies.

Prabaharan et al. (2025) present an optimization mechanism that ensures resilience and flexibility, employs a HDBN for feature extraction, and uses a CAEN for dynamic prediction aggregation. After rigorous testing on four different datasets, the framework produces the following results: recall of 91%, acc of 87%, prec of 95%, and specificity of 95%. An advanced metric that verifies its dependability is a MCC of 0.8932. With its ground-breaking design, the proposed architecture revolutionizes scalable and high-performance segmentation and classification. It solves real-world challenges with confidence and lays the groundwork for future integration with XAI and real-time systems [31].

Al-Asiri and Al-Asmari (2024) The study's objectives are to examine and evaluate classification applications, elucidate their applications and key characteristics in the future of these categories in the Kingdom and the profession of disease detection, and gather the most recent research on disease prediction using classification algorithms. According to the survey's findings, the following categorization methods were employed to forecast heart disease: (RF (88.7%), hybrid classification approaches (87.4%), NB (84%), and the DT technique (99.2%), which has the highest accuracy percentage by study), and the diabetes disease method achieve 98.4%[32].

Ghaffar Nia, Kaplanoglu and Nasab's (2023) goal is to investigate current AI approaches that can diagnose and forecast many diseases (e.g., cancer, genetic, lung, skin, and neurological disorders) more correctly than humans can (i.e., without human error). Furthermore, the challenges and limitations that AI currently encounters in the medical domain are explored

and highlighted. With the help of AI, medical image evaluation has become more accurate and efficient. This has led to better disease prediction and identification, shorter diagnostic times, fewer mistakes, and less work for doctors [1].

Patel et al. (2022) By considering conditions connected to the heart, brain, and cancer, The corpus of research on aided disease prediction is thoroughly reviewed in the AI disease prediction survey. Nonetheless, studies are underway to develop effective AI methods that can aid in early disease prediction and provide insights into patients' profiles. Finish by outlining the unresolved problems and difficulties that the present AI methods for Early detection and prognosis of chronic diseases face, and discussing upcoming research in this field[33].

Mondal et al. (2022) provides a review of several ML methods for the purpose of identifying the disease. The user data's symptoms are used to train these algorithms. The effectiveness of the algorithms was evaluated based on their ability to predict diseases. Numerous ML algorithms have been applied to various real-world datasets, including k-NN, NB, DT, and RF[34].

Deeba and Patil (2021) summaries of the most current advancements in AI-based healthcare and disease prediction systems. In the modern period, healthcare has grown to be both a major industry and a basic human necessity. Medical decision-making might be improved by AI. and correct mistakes like incorrect diagnoses and needless, drawn-out procedures in healthcare systems. The numerous technologies that have been created and are still being developed in the context of healthcare, big data analysis, AI, cloud computing, edge computing, and the IoT[15].

**Table 2: Comparison of Recent Studies on AI-Based Disease Prediction in Healthcare**

Author(s) & Year	Study Objective	AI / ML Techniques Used	Diseases / Scope	Challenges	Future Directions
Prabaharan et al., (2025)	Developed a hybrid AI system for disease categorization and prediction.	Custom Adaptive Ensemble Network (CAEN), Hybrid Deep Belief Network (HDBN), and optimisation technique	Multiple datasets for disease classification and segmentation	High computational complexity and integration difficulty with real-time systems	Integration with Explainable AI (XAI) and deployment in real-time healthcare applications
Al-Asiri & Al-Asmari, (2024)	Review and analysis of classification algorithms used for disease prediction	Naïve Bayes, Decision Tree, Random Forest, Hybrid classification, Neural Networks, KNN, SVM	Heart disease and diabetes prediction	Lack of standardized datasets and variations in healthcare data quality	Development of more robust hybrid models and improved data standardization in healthcare systems
Ghaffar Nia, Kaplanoglu & Nasab, (2023)	Survey of AI techniques used for disease diagnosis and prediction	Analysis of medical images using AI and ML techniques	Heart, lung, skin, neurological, genetic, and cancer	Data privacy concerns, limited availability of medical datasets, and model transparency issues	Improvement of interpretable AI models and broader adoption of AI-assisted diagnostic systems
Patel et al., (2022)	Review of AI-assisted chronic disease prediction systems	Various AI and ML models	Chronic conditions include cancer, heart disease, and brain issues	Limited clinical datasets and difficulty integrating AI models with healthcare	Development of efficient AI models for early diagnosis and improved clinical decision-support systems

				infrastructure	
Mondal et al., (2022)	Examining ML methods for symptom-based diseases screening	KNN, NB, RF and DT	Predicting general diseases based on user symptoms	Dependence on accurate symptom data and limited clinical validation	Use of larger real-world medical datasets and development of more accurate predictive models
Deeba & Patil, (2021)	Review of AI technologies used in healthcare and disease prediction	big data analytics, cloud computing, AI, IoT and edge computing	Healthcare systems and disease prediction technologies	Data privacy issues and complexity of integrating multiple advanced technologies	AI integration with big data, cloud, and IoT technologies for more intelligent healthcare systems

## VI. CONCLUSION AND FUTURE WORK

The development of digital technologies is one of the phenomena that have contributed to rapid change in the medical sector, particularly in disease diagnosis and prognosis. AI has become an effective instrument in terms of the analysis of vast amounts of medical information and helping healthcare providers make the proper and prompt decisions. A wide variety of AI-based disease prediction approaches have been included in this survey. ML methods including DT, SVM, RF, and KNN as well as DL models like ANN and CNN have been covered. These algorithms have shown a high potential for identifying patterns in medical data and enhancing early disease diagnosis. Integrating AI with other technological platforms, like the Internet of Things (AIoT) has extended health monitoring, diagnosis, and prognosis evaluation abilities. Nevertheless, the issues of data privacy, data quality, and model interpretability are also significant. Further research in this field should focus on creating more reliable, transparent, and scalable AI models, enhancing data-sharing systems, and improving cooperation between medical workers and AI researchers to develop healthcare prediction algorithms that are more reliable and effective.

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