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## Analyzing Digital Automation and Its Impact on Mental Health and Examining the Challenges and Opportunities of Digital Technology

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**ABSTRACT:** In recent decades, digital automation has been rapidly expanding as a new tool in the field of mental health. These technologies include mobile applications, online platforms, and artificial intelligence tools that help improve access to psychological services and provide effective treatments. This article analyzes digital automation and its effects on mental health and examines the challenges and opportunities that these technologies provide for improving mental health. This research has been researched and analyzed by referring to the articles listed in scientific sites and using the library method and using reliable sites such as ISI-SID.

**KEYWORDS:** digital automation, mental health, challenges, opportunity, digital technology

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### 1-INTRODUCTION

In recent decades, digital automation has been rapidly expanding as a new tool in the field of mental health. These technologies include mobile applications, online platforms, and artificial intelligence tools that help improve access to psychological services and provide effective treatments (Fitzagard et al., 2020). Digital automation can help people better deal with symptoms of anxiety, depression, and stress. Cope and provide them with tools to manage their mental health. However, the use of digital technologies in the field of mental health also comes with challenges. These challenges include privacy concerns, data quality, and some people's lack of access to digital technologies. (Kumar et al., 2020) At the same time, there are many opportunities that can help improve the mental health of society, including reducing costs, increasing access to services, and the possibility of monitoring the progress of patients. (Benet et al., 2021). This article analyzes digital automation and its effects on mental health and examines the challenges and opportunities that these technologies provide for improving mental health. In today's world, mental health has become one of the most important health challenges. According to the World Health Organization (WHO), more than 450 million people worldwide suffer from mental disorders and this problem is increasing due to social, economic and environmental pressures, the need for effective strategies to manage and improve mental health. It is felt more than before. (Benet et al., 2021) In this regard, digital automation has emerged as a new solution. These technologies can help people access psychological services and manage their symptoms independently. However, the use of these technologies also comes with challenges. Concerns such as data privacy, the quality and validity of the information available on these platforms, and the lack of access of some groups of society to digital technologies, can prevent the full efficiency of these tools (Fitzagard et al., 2020). Therefore, examining the effects of digital automation on mental health and analyzing its challenges and opportunities, especially in the field of providing psychological services, is a vital and necessary issue. This research seeks to answer these questions: How can digital automation be used to improve mental health and what challenges might exist in this direction ?

### 2-THEORETICAL FOUNDATIONS

Research in the field of digital automation and its effects on mental health is of particular importance. Below are some key reasons for the necessity of this research:

**2-1-Increasing the prevalence of mental disorders:** According to global statistics, mental disorders are increasing rapidly, and this makes the need for effective solutions to manage and treat these disorders inevitable.

**2-2-Access to mental health services:** Digital automation can help people access psychological services, especially in areas where there is a shortage of psychological professionals. These technologies can help reduce discrimination and increase access to services.

**2-3-Automatic management of symptoms:** Digital tools provide the possibility of monitoring and managing symptoms automatically. This can help people to actively participate in their treatment process and improve their quality of life (Kumar et al., 2020).

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**2-4-Cost reduction:** The use of digital technologies can reduce treatment costs and help health systems to manage their resources more optimally (Fitzagard et al., 20205). **Identifying challenges and opportunities :** Research in this area can help identify challenges in using digital automation as well as potential opportunities to improve mental health services. This information can help policy makers and mental health professionals design more effective programs. Overall, this research can lead to a better understanding of the effects of digital automation on mental health and improve the quality of services provided in this area. (Benet et al., 2021)

### **3-IDENTIFY CHALLENGES AND OPPORTUNITIES**

#### **3-1-digital automation**

Digital automation refers to the use of digital technologies to provide health care services that allow people to manage their health independently and at the right time. This includes mobile apps, online platforms, and artificial intelligence tools that help users identify and manage their symptoms.

#### **3-2-Mental health**

Mental health refers to the emotional, psychological and social state of a person. This concept includes a person's ability to manage stress, establish positive communication and make effective decisions. Mental health is recognized as one of the key components of public health and has a great impact on people's quality of life

#### **3-3-Effects of digital automation on mental health**

Research shows that digital automation can have both positive and negative effects on mental health. On the one hand, these technologies can help improve access to services, reduce stigma, and raise awareness about mental health. On the other hand, there may be challenges such as privacy concerns and information quality. (Benet et al., 2021)

#### **3-4-Challenges and opportunities**

Challenges include concerns about data privacy, the quality and validity of information, and the lack of access of some groups to digital technologies. Opportunities include increasing access to services, reducing costs, and monitoring patients' progress. In contemporary societies, the increasing use of digital media has caused the issue of the security of these media files to be raised as one of the most important priorities, especially against users who have malicious tendencies. Internet will be correct. Cryptography is the use of mathematical techniques to establish information security. In other words, encryption is the knowledge of changing the text of a message or information with the help of a password and using a password algorithm, so that only a person who knows the key and algorithm is able to extract the original information from the password. In cases where the exchange of encrypted information is problematic, the existence of communication should be hidden. In fact, steganography is a process in which a data is hidden in other forms of data such as photo or text files. The parameters affecting encryption include the following: Confidentiality, Information security, resistance, capacity, Detection, attacks. Design tools for stealth in digital images, Image processing, Noise, Filtering, Compression, Geometric distortion, quality.

In recent years, steganography has received more and more attention from information transmission security researchers. In the field of steganography in images, many different techniques have been presented, all of which aim to reach the highest capacity, security and resistance. These three criteria are in conflict with each other and it is very difficult and maybe impossible to achieve all three things at the same time. The three mentioned goals are located at the three vertices of a triangle. That is, paying attention to each of them requires less attention to other parameters, and it is not possible to satisfy all three of these items at the same time in the best way. The most famous and common method of hiding data in files is to use graphic images as hidden places. By combining the two, confidentiality and security of confidential information can be greatly improved. For steganography operations in digital images, several methods have been invented, which include working in the field of location or frequency (Feng, B. 2010, Gibbs ch 2015), and each one has specific advantages and disadvantages. It is its own and has a special use (Juneja. M. 2014) Embedding in LSB is one of the most common methods of hiding images in which several attacks have been proposed, some of which are accurate and others are less accurate (Mohammadi F, 2014, Shington P, N 2014). Today, research in this field is aimed at increasing the capacity, increasing the quality and reducing the suspiciousness of the output image (China-Chun W, 2011, Jyoti, Md 2013). The rapid evolution of digital technology has improved the ease of access to digital information. Digitization of multimedia data has reliable, faster and more efficient storage and has made the transmission and processing of digital data more active. This issue has also led to the illegal production and redistribution of digital media. Copying and modifying such digital data has become very easy and undetectable. Due to the growth of digital technology that provides fast and error-free transmission. The risk of copyright infringement and the possibility of unauthorized manipulation of multimedia data increases. One of the best methods to answer the above problems is cryptography, which has many applications, including secret communications, broadcast scheduling, proof of ownership, and so on. There are generally two methods for covert communication. The first method is encryption, the information is coded in a way that is not understandable to a third party, but the sender and receiver can decrypt the desired information using a common key. It is thought that by encoding the exchanged message, the communication is secure, but in practice, encryption alone

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is not enough, and for this reason, other methods were presented to hide the data instead of encoding it. The second method is covert writing. Covert writing is camouflaged writing, which literally means hiding the communication by placing the message in a cover medium in such a way that it creates the least detectable change in it and the existence of the message cannot be detected. Hidden in the media is easy to discover. Invisible inks are one of the most common tools for concealment. Another method of hiding data is encryption. Encryption should not be confused with the process of data encryption, although their main goals are the same. In encryption, the importance of the host signal is more important than the included data, which is done with different purposes such as copyright, data integrity and integrity, monitoring the propagation path, etc. In fact, the main difference between these two methods is in the valuable signal, which is included in the encryption of the message, and in the encryption of the host itself, which has a value. Hiding the pattern should not reduce the quality of the original data. According to the application of cryptography, it is done in resistant, semi-fragile and fragile forms. Meanwhile, the applications of resistant methods are more than the rest. Also, from the point of view of detection, cryptography methods are divided into three blind, semi-blind and sighted methods. In blind systems, no clean signal is needed for detection, while in semi-blind and sighted systems, part or all of the clean signal is needed. Today, old encryption methods will not be effective enough to prevent unauthorized use and malicious attacks. In this situation, the inclusion of data, in an intangible form, to prevent unauthorized uses has great commercial potential. Digital encryption has achieved various goals such as proving the right of ownership, verifying the authenticity of the content and controlling the number of printed copies of a work. In encryption, the main goal, security means the inability to prove the existence of the message. The three main features for encrypted images are: the invisibility of the encryption mark, the transparency and strength of encryption against possible attacks and destruction by unauthorized users. Unlike cryptography, which aims to classify information security, cryptography seeks to hide the message itself from others. Hiding is used in both linguistic and technical fields, and hiding in image and sound is relatively more useful than hiding in text and video. Tracking encrypted communications by hackers is difficult, because instead of tracking encrypted data, the hacker must examine all communications, including encrypted and unencrypted data, in the network. Cryptography increases security and privacy by hiding confidential communications. Digital encryption is a process by which a user-specified signal is hidden in other signals, for example digital content can be electronic documents, images, audio, video, etc. There are various techniques to protect original digital data and to prevent unauthorized copying and manipulation. Caption provides a basic solution for summarizing the image and the issue of its authenticity and validity. This solution is a type of data hiding technique, so that it provides another way of maintaining security for digital image data. In contrast to using a special password algorithm to protect and secure secret data from illegal access, the purpose of encryption is to embed secret data in pre-selected meaningful images. Of course, these images are called cover images without making visually perceptible changes in order to keep cyber attackers unaware of the existence of security secrets in information data. Generally, a steganographic message may be a photo, video or audio file. A message may be created using algorithms such as our invisible ink between the lines of secure documents, so as to ensure the security of information: An Issue that is considered important in the modern world of transferring images in networks, then information is embedded on it. Encryption hides text messages by rendering the message unintelligible to outsiders, and often a significant amount of effort is put into deciphering it, so that no one but the recipient can extract this information. Stealth is a secret technique hidden in messages and is not obvious and hence, it is not easy to send. This process is focused on detecting the encrypted hidden content and the objectives of the steganalysis process is to open the hidden messages. The main purpose of encryption is to communicate securely in a completely invisible way and to avoid attracting suspicion to secret data information. Its function is not to prevent others from exploiting to know secret information, but to prevent others from thinking that this information even exists. If the encryption method causes anyone to suspect the carrier medium, the method fails. On the other hand, steganalysis is a method to discover secret communications in contrast to steganography. In other words, steganalyzes try to defeat encryption methods. This device is based on the principle that information hidden in the digital media alters the carrier and creates anomalous effects or a state of confusion that can be exploited. Therefore, it is vital for an encryption system to ensure that secret messages are undetectable. Basically, the cryptography model is a cover object or a medium for placing a message. There are several suitable media that can be used as wrapper-objects, such as network protocols, audio, disk, text file, and image file. The message is the data that the sender wants to remain confidential and is placed inside the wrapper object using a cryptographic encoder. This message can be plain text, an image, or anything that can contain a bit string such as a copyright symbol or serial number. A stego-key is a password that ensures that only a recipient who knows the same decryption key is able to extract the message from the object-encapsulation. The output of the Stygo system encoder is known as the Stygo object. Creating a word that is not visible to the reader, but is characteristic of the text, or coding the text or changing it in a way that cannot be copied with photocopiers, is called hiding in the text. Another method is to use keywords that are hidden, but email servers can be made sensitive to them to prevent them from being broadcast. One of the newest software for hiding text inside another text file is called TextHide. In general, anything can be hidden inside anything by using obfuscation. But it should be noted that the same amount of information cannot be hidden in all photos and it depends on the conditions of the photo and the algorithm used. The approach of this research is to hide textual information on images. What is done in this section is that an image is hidden in another image, so that the hidden

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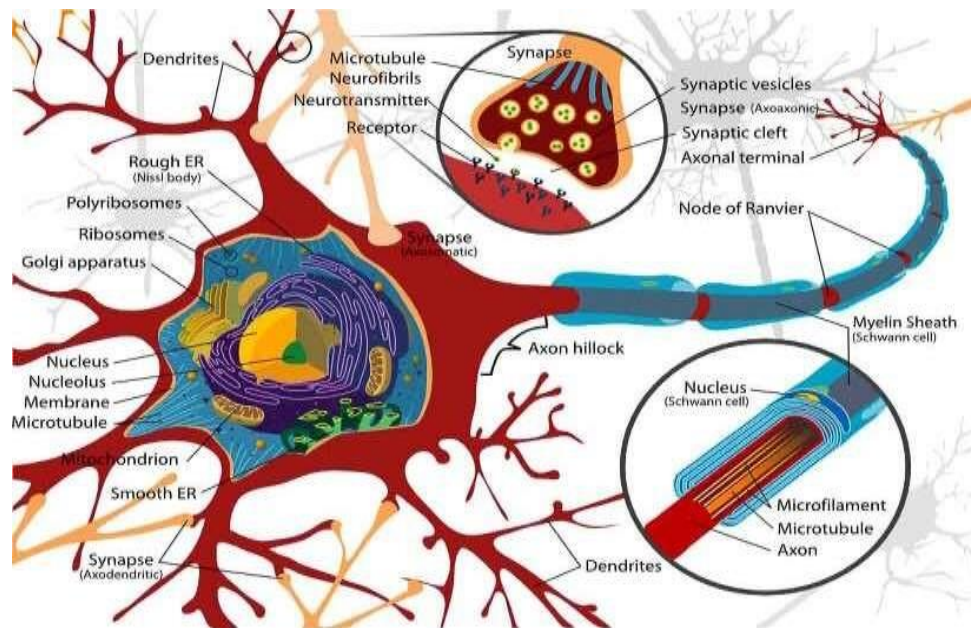
image cannot be seen in the cover image, and the texts in the image are hidden. The most important challenge in this matter is not being able to see the edges of the hidden image or stego in the cover image and not accurately determining the text area. An encryption method can be used to prevent the prosecution of illegal publication of content and production files. Also, encryption in sensitive parts of an organization is considered important. In this way, assuming that in a stock exchange organization, there is an intention to inform text messages in texts based on encryption, so that they can be sent from the origin to the destination. Also, in an organization, an image containing a code is supposed to be sent to a system where only the original user understands its content, which is used encryption. While the purpose of cryptography is to hide information and prevent it from being found and attracting attention, steganalysis is a science that is used to find such hidden content. It can be said that Steganalyze is similar to a detective agency and secret recording is similar to a criminal. One tries to find the other (of course, this does not mean that hiding is bad, but this example is given for a better understanding of the matter). Steganalysis tries to find the hidden information, but often the hidden texts that are hidden using cryptographic software do not show any special sign. That is, for example, if several pictures are given to find a hidden text inside them, one must first identify which photo contains this hidden text, because there is no special sign to recognize it. Even if there is an original photo, it cannot be easily recognized, because neither in terms of appearance nor in terms of size, these two photos are not much different from each other. There are different generations of cryptographic software, of which Steganaliz is one of its types. In general, cryptographic methods are safe if the host image or repository has no detectable signatures. In other words, the statistical properties of the host image should be the same as the statistical properties of the overlay. The ability to detect the message in the image depends on the length of the hidden message. It is clear that the smaller the amount of information that is included in an image, the less likely it is that there will be detectable signs. Choosing the image format also has a great impact on the encryption system. Uncompressed formats such as Bittemp provide a lot of space for encryption, but their use is questionable due to their large amount of redundant information. One of the classic methods in encryption is LSB, according to which various models have been presented for encryption and even image encryption. Due to the weakness of LSB methods and its developed models, newer methods should be used with its integration. Therefore, it leaves open a hot field in this field that can provide new methods with higher speed, accuracy and efficiency. In the research that is being conducted, different methods for cryptography will be investigated, and while examining the basic algorithms, a new method based on cryptography was presented using the combined algorithm of the genetic algorithm based on chaotic theory. The proposed method is to use the genetic algorithm by considering the three components of thresholding and its selection. LSB method will be used for placement. In order to extract data, the value of threshold and width are extracted from nonedge pixels of stego image, which is done with genetic algorithm. In order to be able to extract this value of threshold and width from the non-edge pixels of the stego image, a combined genetic-chaotic algorithm is used. The reason for using the chaotic method is that the problem of concealment in images is extremely sensitive to the initial conditions, which is also present in chaotic systems, and it is worth mentioning that a specific mapping of chaotic methods should be considered, which this research maps. Considers Rossler because of its high sensitivity to noise and initial conditions. The reason for using the genetic algorithm is to solve the challenges and problems of being slow and to improve the sensitivity to noise in the LSB method. Encrypting has various models that can be used as text-in-image, text-in-signal, textin-video, image-in-image, image-in-video, signal-in-image, image-in-signal, and signal-invideo. Named the video. This research is based on text-in-image cryptography. In fact, there are several different images, and the second image is considered, which stores the text in the first image. Perhaps this requires the use of image processing principles, but the topic of machine learning based on deep learning algorithms is more involved. Therefore, this research uses LSTM deep learning, which is based on the gate in the input and middle layers for training and the output layer. In order to validate and evaluate the proposed approach of this research, the evaluation criteria will be used, including mean square error, peak signal-to-noise ratio, accuracy, sensitivity, and feature rate .

### 4-NEURAL NETWORK AND DEEP LEARNING

Artificial intelligence, deep learning, and neural networks represent extremely exciting and powerful machine learning-based techniques that are used to solve many real-world problems. While human-like deductive reasoning, inference, and decision-making by computers have not yet been introduced, significant advances have been made in the use of artificial intelligence techniques and related algorithms. The human brain is quite complex and the most powerful computing machine known. The Internal functions of the human brain are often understood based on the concept of neurons and networks of nerve cells, which are known as biological neural networks. According to Wikipedia, it is estimated that the human brain has approximately 100 billion neurons that are connected in different ways in these networks. At a very high level, neurons communicate and communicate with each other through an interface consisting of axon terminals that connect to dendrites through gaps (synapses) (Schmidhuber, et al., 2015).

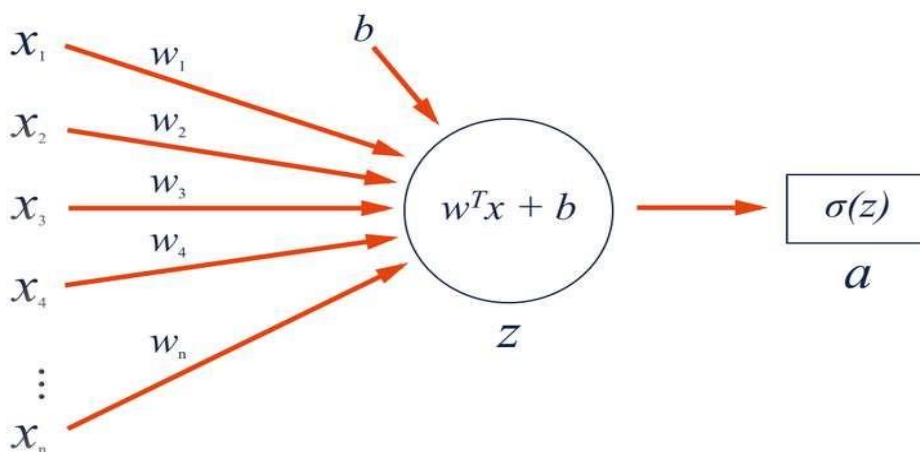


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brain structure and connection between neurons and other components

In simple language, if the sum of the weighted input signals from one or more neurons (summation) is great enough (more than a threshold), it causes a neuron to transmit a message. This action is activated if the threshold is crossed and a message is sent to the next neuron.

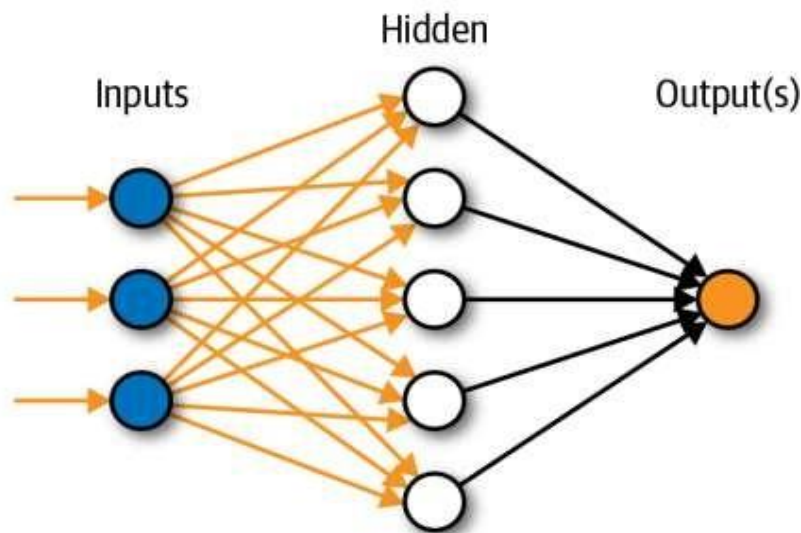


The summation process can be mathematically complex. Each neuron input signal is actually a weighted combination of many potential input signals, and the weighting of each input means that this input can have a different effect on subsequent calculations and ultimately on the final output of the entire network. Additionally, each neuron applies a function or transformation to the weighted inputs, meaning that the combined weighted input signal is mathematically transformed before judging that the activation threshold is exceeded. This combination of weighted input signals and applied functions are usually linear or non-linear. These input signals can originate from many ways, including the senses, which are the most important, as well as for example the consumption of gases (breathing), liquids (drinking) and solids (eating). A single neuron may simultaneously receive hundreds of thousands of input signals, which undergo a summation process to determine whether the message is lost, ultimately causing the brain to train actions, recall memory, and so on. The "thinking" or processing that the brain does and the subsequent instructions that are given to the muscles, organs and body are the result of these neural networks in action. In addition, brain neural networks are constantly changing and updating themselves in many ways, including modifications in the amount of weight applied between neurons. This happens as a direct result of learning and experience. Given these issues, it is a natural assumption that for a computing machine to replicate the functions and abilities of the brain, including being "intelligent", it must successfully implement a computerized or artificial version of this network of neurons. This is the origin of the advanced statistical technique and term known as artificial neural networks (Schmidhuber, et al., 2015). Artificial neural networks are statistical models that are directly inspired by biological neural networks and modeled on them to some extent. They are able to model and process non-linear relationships between input

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and output in parallel. Correlational algorithms are part of the broader field of machine learning and, as discussed, can be used in many applications. ANNs are characterized by adaptive weights along the paths between neurons that can be adjusted by a learning algorithm that learns from observed data to improve the model. In addition to the learning algorithm, one must also choose an appropriate cost function. The cost function is what is used to learn the optimal solution for the solved problem. The cost function consists of determining the best values for all adjustable model parameters, with adaptive weights of the original target neuron pathway, along with algorithm tuning parameters such as learning rate. This is usually done through optimization techniques such as gradient descent or stochastic gradient descent (Schmidhuber, et al., 2015). These optimization techniques basically try to make the solution of artificial neural networks as close as possible to the optimal solution, which, if successful, means that artificial neural networks are able to solve the desired problem with high efficiency. Architecturally, an artificial neural network is modeled using layers of artificial neurons or computational units that are capable of receiving input and using an activation function along with a threshold to determine the transmission of messages. In a simple model, the first layer is the input layer, followed by a hidden layer and finally an output layer. Each layer can contain one or more neurons. Models can become increasingly complex and more abstract and problem solving by increasing the number of hidden layers, the number of neurons in any particular layer, and/or the number of paths between neurons. It should be noted that with the increase in the complexity of the model, the possibility of overfitting or the problem of overfitting may also occur (Schmidhuber, et al., 2015). Furthermore, the models are characterized and tuned by the activation function used to transform the weighted input of a neuron into its output activation. There are different types of transformations that can be used as activation functions, and discussing them is beyond the scope of this research. Abstraction from the output as a result of the transformation of the input data through neurons and neurons is a type of distributed representation that contrasts with the local representation. For example, the meaning reflected by an artificial neuron is a type of local representation. The meaning of the whole network, however, is a kind of distributed representation that is created due to many changes in neurons and neurons. One thing worth noting is that although artificial neural networks are very powerful, they can be very complex and can be considered black box algorithms, meaning that it is very difficult to understand and explain their inner workings. Therefore, the choice of whether to use the artificial neural network to solve problems should be chosen according to this issue (Schmidhuber, et al., 2015).

### Artificial Neural Network



An artificial neural network has neurons and an input layer, a hidden layer with weight and bias, and an output layer. Generalization of artificial neural networks creates deep learning structures. Deep learning, while it sounds fancy, is actually just a term to describe certain types of neural networks and related algorithms that often consume very raw input data. They process this data through many layers of non-linear transformations of the input data to compute a target output. Unsupervised feature extraction is also an area where deep learning excels. Feature extraction is when an algorithm is able to extract or automatically construct meaningful data features that are used for further learning, generalization, and understanding. This burden traditionally falls on the data scientist or programmer to perform the feature extraction process in most machine learning approaches, along with feature selection and engineering. Feature extraction usually includes dimensionality reduction, which reduces the amount of input features and data required to produce meaningful results. This has many advantages, including simplification, reduction of computing power and

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memory, etc. In general, deep learning falls under the group of techniques known as feature learning or representation learning. As discussed so far, feature extraction is used to “learn” which features to focus on and use in machine learning solutions. Machine learning algorithms “learn” themselves the optimal parameters to create the best performing model. In Wikipedia’s terms, feature learning algorithms allow a machine to both learn for a specific task using an appropriate set of features and learn the features themselves. In other words, these algorithms learn how to learn. Deep learning has been successfully used in many applications and is one of the most advanced machine learning and artificial intelligence techniques at the time of this writing. Related algorithms are often used for supervised, unsupervised and semi-supervised learning problems. For deep learning models based on neural network, the number of layers is more than the so-called shallow algorithms. Shallow algorithms are less complex and require more prior knowledge to use optimal features, which usually includes feature selection and engineering. In contrast, deep learning algorithms rely more on optimal selection and model optimization through model tuning. They are more suitable for solving problems where prior knowledge of features is less needed or necessary and labeled data is not available or required for primary use cases. In addition to statistical techniques, neural networks and deep learning concepts and techniques also use signal processing, including nonlinear processing and/or transformations. A nonlinear function is a function that is not defined only by a straight line. Therefore, more than one slope is needed to model the relationship between the input or independent variable and the output or dependent variable. Nonlinear functions can include polynomial, logarithmic, and exponential terms, as well as any non-linear transformation. Many phenomena observed in the physical world are best modeled by nonlinear transformations. This is also true for transformations between inputs and target outputs in machine learning and artificial intelligence solutions (Schmidhuber, et al., 2015). Deep learning analyzes complex problems to facilitate the decision-making process. Deep learning tries to mimic what the human brain can achieve by extracting features at different levels of abstraction. Typically, higher level layers have less detail than lower level layers. The output layer produces an output by nonlinearly transforming the input from the input layer. The hierarchical structure of deep learning can support learning. The level of abstraction of a particular layer will determine the level of abstraction of the next layer, because the output of one layer will be the input of the next layer. In addition, the number of layers determines the depth, which affects the level of learning (Schmidhuber, et al., 2015).

### **5-CONCLUSION**

The theoretical foundations and definitions presented in this section contribute to a better understanding of digital automatism and its effects on mental health. This information allows researchers and policy makers to design more effective programs to improve mental health. Research in the field of digital automation and its effects on mental health is a vital and necessary issue in today’s world. With the increase in the prevalence of mental disorders and the limitations in accessing mental health services, using digital technologies as a new solution can help improve people’s mental health.

5-1-Increasing access: Digital automation can help people to access psychological services easily and without stigma. This is especially important for vulnerable groups who may not have access to traditional services.

5-2-Symptom Management: Digital tools enable automatic monitoring and management of symptoms, which can help people improve quality of life and reduce stress.

5-3-Challenges: Despite the many benefits, there are challenges such as privacy concerns and information quality in this area that require attention and careful consideration. Finally, digital automation can act as an effective tool in improving people’s mental health, but in order to take full advantage of this technology, it is necessary to identify challenges and provide appropriate solutions to solve them. More research in this field can help policy makers and mental health professionals design better programs to promote mental health and help people better manage their health.

### **6-SUGGESTIONS**

6-1-Further Research: Conduct more studies to examine the long-term effects of digital automation on mental health and identify best practices.

6-2-Education and Awareness: Increasing public awareness about digital tools and how to use them correctly to improve mental health.

6-3-Development of policies: Developing appropriate policies and standards to protect users’ privacy and guarantee the quality of digital services. This research can serve as a basis for further development in this field and improving the quality of mental health services.

### **7-UPCOMING OFFERS**

7-1- Future research: Conducting experimental and longitudinal studies to evaluate the effects of digital automation on mental health in different age and social groups. Examining the specific effects of each type of digital tool (such as applications, online platforms, etc.) on mental health.

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7-2-Training and empowerment:Developing training programs for users on how to use digital tools for mental health management. Providing training courses for mental health professionals in the field of using digital technologies in the treatment of patients.

7-3Development of policies:Creating specific policies to protect user data privacy and ensure information security.Cooperation with governmental and non-governmental organizations to improve access to digital services in deprived areas.

7-4Variety of tools :Designing and developing digital tools tailored to the specific needs of different groups, including teenagers, the elderly, and people with special disabilities.

### 8-LIMITATIONS

8-1-Access to technology:The lack of access of some groups of society to the Internet and digital technologies, which can lead to an imbalance in the use of services.

8-2-quality and validity of information:Existence of incorrect or invalid information in some digital platforms that can lead to wrong decisions.

8-3-Privacy Concerns:Privacy and data security concerns, which may deter people from using these tools.

8-4-Lack of human interaction:The lack of human interaction in digital treatments may not be enough for some patients and may not satisfy the need for emotional and social support.Despite the existing challenges and limitations, digital automation can act as an effective tool in improving mental health.According to the suggestions presented, it is possible to help in the optimization and development of these tools and ultimately to improve the quality of mental health services.

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