



A Review on - Artificial Intelligence in Pharmacy

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ABSTRACT

Artificial intelligence is computer based system that performed to task that human intelligence. Artificial intelligence in today's world is progressively rapid with new innovations day in day out. Today's computer based system is designed to perform small task that human intelligence and other duties. The use of the artificial intelligence can save time and money while providing better understanding of the relation between different formulations in the pharmacy. The first goal of artificial intelligence is to develop one or more complicated tasks like solving equations and in future goal of artificial intelligence is to perfect all human activities.

Keywords: Save Money, to develop the complicated task, formulations in pharmacy.

INTRODUCTION

Artificial intelligence is branch of computer science that deals with the problem solving by the aid of the symbolic programming. It is mostly involved in science of problems solving with application of business healthcare and engineering.¹ In recent years, progress has been made in computer science and artificial intelligence. Watson, Siri or deep learning show that AI system are now delivering services that must be considered intelligent. The AI system was the very useful we can need to the humans resources and High quality of the computer system. The field of the artificial intelligence was not published in 1956. In 1956 the artificial intelligence was held for the first time hangover.²

The artificial intelligence was first coined by the concept John McCarthy. In 1956 in his first academic conference on the subject. In 1956 the artificial intelligence born in this year.³ In 1956 Dartmouth college has organized the famous conference and the preceding the year that is 1955, so these is the first artificial intelligence system that was called logic theorist and the people who developed it Allen-Newell and Herbert Simon. The Alfred N. Whitehead and Bertrand Russell was coined by the 40 theorems of Principia Mathematica, these systems is proved. But these system do not get published.⁴ The mathematician Alan Turing was introduced by the concept of machines operating in people. In people get the, if it is possible to make the machines and having some ability to think and learn by the computer machine itself. Artificial intelligence was the increasing every day, so that the artificial intelligence was introduced to market, because some reasons of the quick changes in business fields. In artificial intelligence was predicting by the computer scientist by 2020. About 75-90% of customer interaction will be managed without people. It is very important to prepare for AI revolution like UAE have been installing a state minister of artificial intelligence in Dubai.¹

Application of artificial intelligence in pharmacy

Atom wise
TwoXAR
Revivemed
Phonemic AI
Structural biotechnology

A. Atom wise- It is decreased the some amount of money and time spends on finding the compounds for medication. It is also used to develop safer, more effective agricultural pesticides. It is also used to design to predict activity of small molecules for drug discovery application.

B. TwoXAR- It is used to identify drug novel diseases.

C. Revivemed- It is used in analysis of metabolomic data in with information of data from genes, proteins drugs diseases.

D. Phonemic AI- It is used in detection in Histopathology and genome wide microscopy.

E. Structural Biotechnology- It is used to enhancing the success of structural biology research.⁵

Applications-

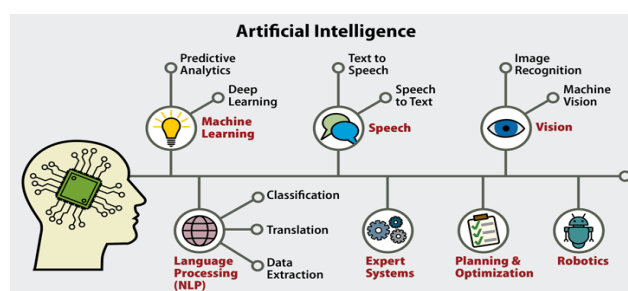


Figure 1: Application of artificial intelligence

It includes:

General AI- These systems typically learn from the world around them and apply data in a cross-domain way. For example, Deep Mind, now owned by Google, used to describe how to play games. As shown in Figure 1 and 2.

Natural Language Processing (NLP) - This technology allows machines to read, understand, and interpret human language. NLP uses statistical methods and semantic programming to understand grammar and syntax, and, in some cases, the feelings of the writer or those interacting with a system like a chat bot.

Machine perception- The last few years, enormous advances in sensors — cameras, microphones, accelerometers, GPS, radar and many have powered machine perception, which encompasses speech recognition and computer see used for facial and object recognition.

Robotics- devices are used in factories, hospitals and other settings. In recent years, drones have also taken flight. These systems - which rely on sophisticated mapping and difficult programming, also use machine perception, to navigate through tasks.

Social intelligence- Autonomous vehicles, robots, and digital assistants such as Siri and Alexa require coordination and orchestration. As a result, these systems must have an understanding of human behavior along with social norms.⁷

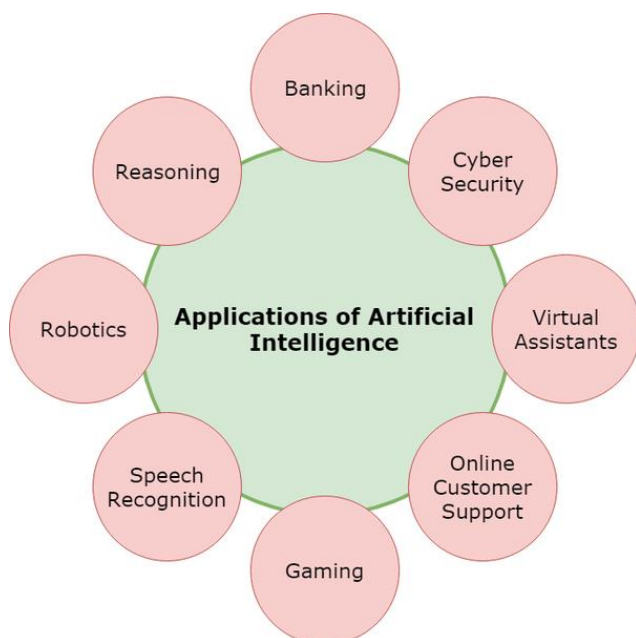


Figure 2: Application of artificial intelligence

Expert systems and natural language processing these terms are used interchangeably, their objectives are different.

Working of Speech and Voice Recognition Systems- The user input is a microphone the converter turns the analog signal into equivalent digital signal for the speech processing. The words used to describe finally; a reverse

feedback was given to the database. This source-language text gets input to the translation engine, which converts it into the target language text. They are attached with interactive GUI, large database of vocabulary, etc.

Expert Systems-

Examples – Flight-tracking systems.

Natural Language Processing-

Examples: Google recognition, speech recognition, Automatic voice output.

Neural Networks-

Examples – Pattern recognition systems such as handwriting recognition.

Robotics-

Examples – Industrial robots for moving, spraying, painting, drilling, cleaning, coating, carving, etc.

Fuzzy Logic Systems

Examples - electronics, automobiles, etc.

Where artificial intelligence is used in pharmacy

- A. Automated transport system
- B. Involvement in dangerous jobs
- C. Computerized methods
- D. Reduced human effort
- E. Time saving

- **Automated transport system**

- AI as the technology behind self-driving cars has improved Life in several ways through self-driving; the number of accidents has been substantially decreased (Harper, Hendrickson and Samaras 2016). In most cases, the ends are attributed to big factors such as alcohol, over speeding, drugs, aggressive driving, lack of experience, ignorance of road signs and the set conditions, steady reaction time and overcompensation. Given that about 40% of total accidents are due to the influence of alcohol and drug abuse consequently, not more than 2000 but more than 1100 lives are lost of self driven cars.

Involvement in dangerous Jobs

AI developed robots are being handled by dangerous hazardous situations. Robots have taken over positions those are harmful to human beings (Smith & Anderson 2014). Some of the dangerous jobs include defusing bombs, which pose a lot of risk to human Therefore, with the development of robots, diffusing the bombs have become easy since the robots cannot do fear. As a result, robots have significantly assisted in savings thousands of lives in the world today.

Computerized method

Automated means of reason, learning and the way people feel through the application of GPS during. The long drives

and trips, to be used in the smart phone industry People are live. With AI, it has been the decreased occurrence of errors. When typing so that computers can predict to make the correction, errors to incorrectly typed words. This is the example of the AI machine at work.

Reduced Human effort

In daily life today many industries are using human technology in the development of machines that perform the human activities these tools can create the consistency in the workplace.

Time saving

In today's world time is the great essence and people are willing to develop machines that help in saving time so that saving time is important.⁶

Advantages and Disadvantages of artificial intelligence

Advantages of artificial intelligence

Artificial intelligence can require the cheap labor.

Artificial intelligence can require less resource.

It can be changed by human jobs by transportation process

It is self-learning software, self-typing and self-understanding software's.

It requires easier modifiability.

Disadvantages of artificial intelligence

- A. Artificial intelligence is not employment
- B. It is not predictable and not seen impacts of new features.
- C. For expert system, artificial intelligence approach is not approved for high problems.
- D. Reasons can failure for the artificial intelligence is absence of employs and lifecycle.⁷

CONCLUSION

In Today's computer system artificial intelligence in today's world progressively very rapid in day to day out in the

various system. In conclusion, artificial intelligence has substantially improved on people's lives in different ways, and people are not the same as before the introduction of AI As discussed above, implementing of time-saving which in turn has led to increased output from the businesses and day to day activities. Moreover, has developed the human effort, computerized methods, automated transport system Evidently, AI has dramatically influenced the people's lives and done wonders to help in the automation process Much of these methods labor to complete With AI automation of these processes will be contributed a lot to the actual activities.⁷

REFERENCES

1. Manish Vyas, Sourav Thakur, Bushra Riyaz, Kuldeep.k.Banasal, Bhupendra Tomar, Vijay Mishra Artificial Intelligence: The Beginning of a New Era in Pharmacy Profession, Asian Journal of Pharmaceutics, 12(2), Jun 2018, 72.
2. Maad M. Mijwel Computer science, college of science, University of Baghdad, Iraq, Research gate, April-2015.
3. Dr. Hiba Tabbarah, Abdullah Abdulghafar, Artificial Intelligence, Advanced Analysis and Design: CNIT 380, December 2017.
4. Charles Wright, project Architect Mohamed akrouf, Global scholar navneeta kaul, Global scholar, what are the applications of artificial intelligence in drug discovery and development, August 2018.
5. Samuel Greengard, what is artificial intelligence big data 2019: mining data for revenue.
6. Hafiza Elbadi Ahmed, Advantages & disadvantages, *International Journal of Scientific Engineering and Applied Science (IJEAS) – Volume-4, Issue-4, January 2018.*
7. Indrasen Poola, How Artificial Intelligence in Impacting Real Life, International Journal of Advance Research and Development. 2(10), 2017, 99.

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