Editorial

Application of Artificial Intelligence in Different Businesses

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This science can be used in different businesses and it will bring many benefits in every business. Below are some examples of these applications in each field.

Artificial intelligence in health

The most important point in this field is to improve patient outcomes while reducing costs. Companies active in the health field want to use machine learning to make the process of diagnosis and treatment better and faster. One of the most well-known technologies in this field is the IBM Watson system. This system understands natural language and is able to answer the questions that are asked of it. This system extracts all the information about the patient from the available sources to create a hypothesis and provides it after confirmation. Other applications that have artificial intelligence, such as chatbots, can help patients schedule appointments, answer questions, issue bills, or provide medical feedback as a virtual health assistant.

Artificial intelligence in business

Robotic automation processes can be used for highly repetitive tasks and processes that are performed by humans in any business. Machine learning algorithms can be integrated with analytics and CRM to better serve customers by discovering the necessary information. Chatbots can also be used to provide instant customer service on the website.

Artificial intelligence in the field of education

Artificial intelligence in this area can help to automate the scoring and grading of students and give teachers more time. AI can assess students and adapt to their needs, working with each individual at their own pace. AI tutor systems can provide additional support to students and ensure that their learning process is on track. Artificial intelligence can change the way students learn and where they learn, and even change some of their teachers.

Artificial intelligence in the field of economics

Artificial intelligence systems in personal finance programs, such as Mint or Turbo Tax, can collect personal financial information of each person and give them financial advice. Other applications such as IBM Watson can even be used in the home buying process. Today, software is doing a huge part of trading on Wall Street.

Artificial intelligence in the field of law and justice

The process of discovering documents is often very difficult for humans. Automation and artificial intelligence can help this process and use time more efficiently. Startups are building computer assistants that sift through questions and answers and can answer programmed questions in the ontology by examining and classifying and a database.

Artificial intelligence in the field of production

This is the field where robots can circulate the work as much as possible. Industrial robots can perform each assigned task completely and operate independently of human employees.

Artificial intelligence in establishing security

Artificial intelligence and image processing technology are used in establishing security, tracking criminals, finding the identity of criminals, etc. These systems are able to use artificial intelligence to recognize the faces of different people, the existence of objects, etc.

Artificial intelligence and data interpretation

Big Data is a term used to describe large amounts of data (both structured and unstructured data). Big data can be used to extract information needed for important and vital decisions and execute strategic and sensitive moves more accurately. With the help of big data, a data scientist is not only able to analyze the needs of people, but also learns about the rules governing markets and various trends. Analyzing large amounts of data is not possible without any intelligent system and only by humans. Because the volume of data is very large and the amount of this volume is increased every day. Therefore, it is clear that by using artificial intelligence in the interpretation of big data, we reach many new concepts, the result of which has the ability to transform a huge part of society and human life.

Challenges of artificial intelligence

The application of artificial intelligence not only in Iran but also in many advanced countries faces many challenges. The main chal-

lenge that businesses have to deal with in applying artificial intelligence is related to people and manpower, required data and information, or business preferences and balances. In the following, we will examine each of these challenges briefly.

Challenges related to data and information

The problem of data is probably one of the issues that most companies will be dealing with. Any artificial intelligence system will perform as well as the data that is given to it. In fact, data is the main element required for all the solutions that artificial intelligence is going to put in front of a business. Some of the problems related to data and its collection are:

- How the quality and quantity of data
- Data label
- Understandable and explainable
- Case-specificity of the training process you have a side
- Dealing with model errors

Challenges related to people and human resources

There are two major problems related to people to apply artificial intelligence, and these two problems are one is the lack of understanding of artificial intelligence among non-experts and employees of a company, and the other is the lack of artificial intelligence experts in the field of every business. Applying artificial intelligence in a business largely requires a management familiar with artificial intelligence and understanding that technology. Unfortunately, many people still look at artificial intelligence as a myth and have unscientific and somewhat imaginary expectations of it and do not know what transformation artificial intelligence can bring to their business.

Internal organizational challenges and internal policies of every business

In every business organization, there are some major problems for applying artificial intelligence, which are caused by the internal policies of the organization and internal decisions. These challenges include:

- Lack of business balances
- Difficulty in assessment
- The challenges of integrating business and artificial intelligence together
- Legal issues