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# THE PREDICTIVE ANALYSIS AND MACHINE LEARNING PLATFORMS

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**Abstract:**
*In the last decades technology has evolved a lot, which at the beginning of the 20th century seemed a fiction today is a reality. Cordless phones, the internet, computers, spacecraft, robots are just some of the discoveries made over the past decade that have had a major influence on the world we live in. These discoveries have generally been made to facilitate human activities, such as: real-time communication at very large distances free of charge or with substantial costs, finding / obtaining easily the information you need from absolutely any field, obtaining fast results and with considerable precision. In this article I will present the concept of Artificial Intelligence, what it represents, what are its fields and technologies, where it is used and what facilities it offers us. It is a dynamic field driven by substantial investments in research and rapid growth of knowledge performance. All the efforts made by scientists or independent researchers go towards the desire to truly create an Artificial Intelligence.*

**Key words:** machine learning, artificial intelligence, optical character recognition, supervides learning,

**JEL classification:** M15, M21

## 1. INTRODUCTION

The possibility of successfully implementing human characteristics, such as: feelings, compassion, thinking, how to perceive things, etc., a car is exceptional and long-awaited. If the successful combination between cars and people is successful, a new, stronger, smarter and unlimited life will emerge. Of course, the aim is to create robots with AI to help the human, the basic rule induced by a robot is that "no robot can hurt and / or kill a human, the main priority being to help people", but it is hard to believe that a robot with such a lot of force and already aware will agree or follow this rule (Avron, 1982). However, the realization of such a robot is not very far, but not even close, maybe in the meantime other approaches will be found and other principles will be established so that humans and robots can survive and live together helping each other.

I will also present the diagnostic term and its importance in the development and success of a business. Business people, especially at the beginning of the road, often tend to go based on intuition. Indeed, there are many happy cases where this approach has saved and even developed a business. However, in the long term it is recommended or even necessary to undertake specialized studies by professionals to solve certain situations. Diagnosis is an important factor for the operation of a business, it provides information about its situation, possible problems and the possibility to solve them. In some cases, the diagnosis is made too late for the trading company to be saved, but because of this process of analysis you can figure out where those problems were and what caused them so that in the future you will know in advance of their occurrence (Gadjimuradova, 2015). Of course, there are other ways to make a business viable, for example, prediction, which is also important because it gives you information about what will happen in the future and what to expect, which helps you make certain decisions, but , because the prediction is possible and not sure, you have no way of really knowing what will happen (Searle, 1992). Therefore, diagnosis is an important factor of interest for the growth or maintenance of a company on the market.

The ability to think and make decisions has always been attributed to people, "I think - so there is" - said the famous mathematician and philosopher Decart. However, with the development of technology, a term has appeared, relatively new even today, namely "Artificial Intelligence", increasingly used today, because it offers a multitude of facilities and possibilities in many areas, such as: medicine, the car manufacturing industry, aeronautics, factories / factories, finance and economics, video games, the army, art, auditing, advertising, etc. It is a vast field that is constantly changing, so defining this phenomenon is difficult.

## 2. WHAT IS ARTIFICIAL INTELLIGENCE (AI)?

The term artificial intelligence can be defined in several ways, for example, John McCarthy (McCarty, 2001), known as the "parent" of artificial intelligence said that this is "the science and technology of making intelligent machines", Marvin Minsky considers AI as "the science of artificial intelligence" (Horgan, 1993), performing the machinery capable of performing actions that would require intelligence if they were performed by humans" (Kaplan, 2018). A broader description of AI is "the field of computer science that deals with the study and creation of computing systems and programs that present a form of intelligence: systems that learn new concepts, that can reason and deduce useful concepts in a field of the world. systems, which can understand natural language or perceive and understand a landscape, which can learn and make decisions, in a word systems that require human-specific intelligent capabilities" (Iancu, 2016). The main idea deduced from the above definitions is that AI = natural / human thinking.

One way we can tell whether a computer is intelligent or not is through the Turing test or the so-called "Imitation Game", created by British computer scientist and mathematician Alan Turing (1912 - 1954). in 1950. The basis of this test was the ability of the computer to be able to mimic human conversation, if a computer manages to make its interlocutor think that it is talking to a person, it means that this computer is intelligent, so the test will pass. Over and over, there have been pro and cons discussions about the correctness of this test and whether it can really prove whether a computer is smart or not. Some believe that a computer that passes this test is not necessarily smart because it has been programmed to analyze every word, interpret the general meaning and provide the right answer to the situation, however it cannot learn on its own and react to situations. for which it was not programmed, so it is not smart. Others, more optimistic, believe that computers that have passed or will pass this test are a proof of AI development. Although major discoveries and achievements have been made in this area, we cannot yet say that we have really come up with an artificial intelligence that completely simulates human thinking and / or behavior. IA offers, of course, some benefits that are far superior to human ones.

There are many examples that prove that data science and AI can be used to achieve the 17 goals of Sustainable Development Goals (a collection of 17 goals proposed globally, to be achieved by 2030) that will transform the world. from all points of view. The 17 goals are presented in figure no.1.


**Figure no.1. Sustainable Development Goals**
Source: Own achievementie

## 3. MACHINE LEARNING PLATFORMS

Machine Learning Platform - is a pre-configured technology platform that operates in a simple and efficient way AI. It integrates different functionalities, in particular machine learning algorithms. In general, it is a cloud solution that builds mathematical models, which are subsequently used in the development of applications. The main objective of a Machine Learning Platform is to implement predictive analysis solutions.

**Machine Learning (ML)** is the scientific study of algorithms and statistical models that computer systems use to perform specific tasks without the need for explicit instructions, based only on models and inferences. Professor Klaus Martin Schwab (founder and chief executive of the World Economic Forum, International Organization for Public-Private Cooperation) said that "the fourth economic revolution is built on the Internet, AI and machine learning (ML)" (Klaus, 2016). ML is one of the AI sub-domains, about how computers learn from experience to improve their ability to think, plan, decide and act. To better understand the concept of ML, what it does and where it is used I will give the following examples from the daily life in which ML is present:

- Surely each of us needed to get from point A to point B, this does not cause problems if you know the direction, but when we are in an unknown area this process is more difficult. The Google Maps (Maps) application gives us the opportunity to see where we are in real time and where to go to get to where we need it, more than that, it gives you the shortest possible route and possible traffic jams or accident and bypass his;
- Almost all of us have email addresses where we receive a lot of messages every day, some important, others less and more useless or spam. In these cases, the filters against spam are very helpful. These filters must continuously learn from a variety of changing signs (for example: certain words, who the sender is, where the message is sent, etc.) to be able to catalog this type of message as closely as possible. The Gmail app successfully filters 99.9% of spam;
- For categorizing messages, Gmail uses an approach similar to the previous one, for example, whenever a user marks a message as important, Gmail learns, so in the future to display your messages with greater importance to reduces you from the time you spend reading messages;

- The banking industry has started to increasingly use AI and ML technologies, for example, there are banks that offer the possibility, through a mobile application, to deposit checks, without having to move to the bank. A large majority of banks use Mitek technology (an identity identification application that uses AI and ML to allow users to perform online transactions from their mobile phone or computer securely) to convert handwriting from checks to text through through OCR (Optical Character Recognition) (Ian, 2016);
- Facebook The Facebook socialization platform also uses AI and ML. For example, identifying a person in a photo, for this Facebook uses artificial neural networks - ML algorithms that mimic the structure of the human brain to empower facial recognition software. In fact, the company has invested heavily in these technologies through the acquisition of face.com - a face-recognition start-up, Masquerade (MSQRD) - an application that gives you the ability to create and use filters and masks and faciometrics - a software for facial analysis. Through ML, Facebook personalizes your news and advertisements so you can see what interests you. Similar applications are Pinterest, Instagram and Snapchat.(Klaus, 2016)

ML theory is broad and full of a variety of algorithms that differ in their approach, the types of data entered and obtained, the types of tasks or problems that need to be solved. We distinguish seven types of ML algorithms presented in the following figure 2:

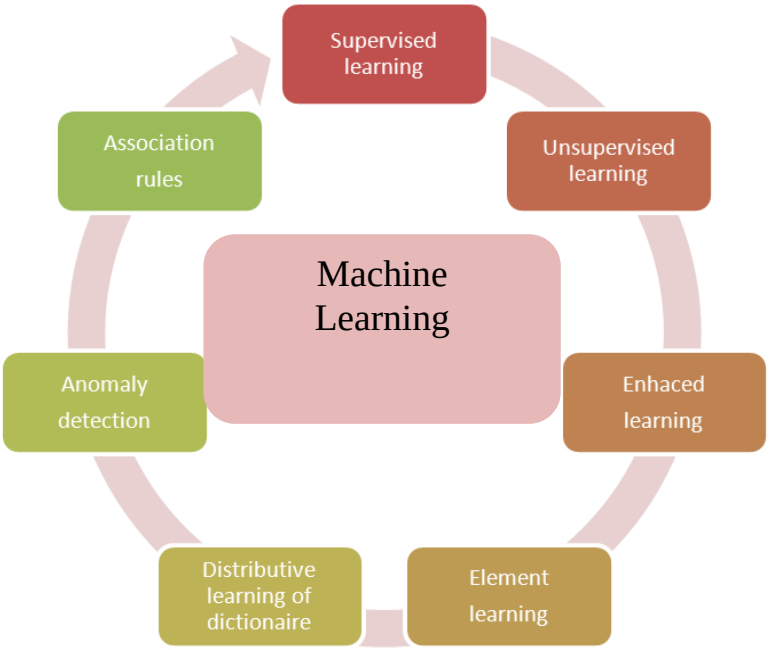


**Figure no. 2. ML algorithms**
Source: Own achievementie

Most ML tasks can be divided into supervised learning and unsupervised learning.

## 4. CONCLUSION

The advances in Information and Communication Technology generate global changes in our environment - from the way of communication and behavior to the forces that make up our economies and societies. Certainly Artificial Intelligence offers the opportunity to develop the importance of data and to allow decisions based on clear examples and evidence to measure progress and drive sustainable transformation into development.

In health, AI can improve the working methods of doctors and complement the traditional methods of medicine by improving the accuracy and speed of establishing a diagnosis. In education,

AI and data analysis can be used to create individualized individual learning for each student. A key advantage of AI is the ability to analyze large amounts of data and identify patterns and correlations that may go unnoticed or are too small to be observed by one person. It can also be used in the monitoring, planning and management of production and consumption in different industrial sectors.

The recognition of AI benefits is a global phenomenon. It creates complex and different challenges. But, from this point of view, AI is seen as a disturbing element because it is a cause of unemployment. The replacement of the manual labor force with the mechanical one is beneficial only to the entrepreneur, because people lose their jobs which leads to poverty, diseases, lack of education, etc.

The appreciation that the potential of AI has a major impact on the world around us is justified by the fact that the fields that implement and use this technology are growing. Encouraging the study of AI is also a step towards its development.

AI has quickly become a necessary part of daily life, changing our way of working, shopping, traveling and interacting with one another. But we are just at the beginning of a new era in which AI is going to radically change society and culture globally. It has a huge impact from the beginning and all the discoveries made so far have used only a few facilities and possibilities offered by AI and its subdomains. In this way we can only imagine the true potential offered by this industry. However, its development and implementation is presented as an expensive process that requires high costs. The lack of investments, knowledge and necessary materials are obstacles caused by the dispersion of states. In the pursuit of supremacy and power, states have forgotten that true power lies in unity.Despite all the facilities and possibilities offered by AI, many people have different perceptions of this technology. Some do not understand this concept, others do not accept it as it is something unnatural (for religious reasons), some do not trust this technology (for reasons of data and personal security). For this reason, AI should be learned, deepened and understood by as many people as it is only in this way that its capabilities and properties can be made known. In this case, Governments should invest more in educating citizens and link public-private partnerships for the safe adoption of the systems that have implemented AI.

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