Application of Artificial Intelligence in the Business

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ABSTRACT

The development of artificial intelligence (AI) starts in the 1950-year whit lot of skepticism. With the development of informational technologies, skepticism related to the AI is decreasing ant its applicability is increasing. AI shown special usage in the management of the complex system as well as the help for humans in different kinds of processes. One of the most frequently used AI is in the business where is used for the decision-making process support, making different kind of the simulations as well as the base for the developing competitive advantage of the organization

Keywords:	Artificial intelligence; competitive advantage; machine learning; organizational performances; quality management.

The initiative for developing Artificial Intelligence (AI) system starts in the 1950 year. With the appearance of the initiative there is also the appearance of several doubts about its application and its usage. So, scepticism as the result have so-called AI winter which in a significant way decrease the speed of the developing AI. At the beginning of the development of AI, there is a challenge related to the lack of computer systems as well as computer technologies. Furthermore, there is also a challenge related to the speed of such systems that are not good enough. With the development of computer science and computers as a whole, the development of AI is increasing. The first usage of AI was in the United States Department of defense in which the main usage of the AI system was collecting and analyzing large amounts of data. In the 1990 year, AI was used in the game industry. This year is also a pivotal year for AI and its popularity because AI chess software showed that it can win against humans in the chess game. After usage in the game industry, AI shown great potential and give the basis for the normal functioning of different kinds of other technological innovations such as robots and all other automated systems. Because of the increase in popularity of AI, AI today is often used in different kinds of science where the possibility of analyzing large amounts of data becomes the basis for the decision-making process. One of the most popular ways of using AI is in healthcare where AI showed special applicability when it comes to diagnostical procedures. Furthermore, AI can be used in civil engineering, business, etc. Accordingly, there is a need for developing different kinds of policies and ethics when it comes to the use of AI in solving everyday problems and the decisionmaking process. Furthermore, the development of AI in the future will result in the redefining need for specific jobs and the possibility of substituting human labor in some sectors.

It should be highlighted that AI has specific usage in the business organization in which organizational management will have the opportunity to create more precise decisions through simulations. In other words, with the help of AI some departments and education in the organizations will be redesigned. This paper

is based on conducted secondary research. The main aim of the paper is to show the applicability and advantages of using AI in everyday business as well as the usage of AI in the quality management of the organization. Paper is divided into five chapters. First chapter describe the short history and gives a short introduction of AI. The second chapter is about AI and its characteristics. The third chapter describes usage of AI in different organizational departments. The fourth chapter is about the implementation of AI in the organizational system as well as the maturity of the AI system in the organization. The fifth chapter is discussion about conducted research and the sixth chapter is the conclusion. When it comes to the performance of the AI system, it should be mentioned that performances are determined with technical and technological competence of the organization. Technical competence is related to the machines and devices, and technological competence is related to the possibilities to use AI systems in performing different tasks in the organization. So, the possibilities of using AI in the business are determined with digital transformation, and digital transformation brings implementing technical and technological innovations that can increase the competence of the organization.

Table 1. Area of AI usage and description

Area of the usage	Short description
Healthcare	In healthcare, AI can be used for the analysis of the different kinds of medical diagnostic procedures. In such cases, AI can be based on the learning previously analyzed data that is described in chapter 2.2, and also much faster and more accurately identify a health problem. Furthermore, intelligence can be used for the helping of medical stuff when performing different kinds of medical procedures such as surgery procedures, for the education of medical stuff, etc. With the development and possibilities of AI in healthcare, there is less need for medical stuff because AI can be used for performing complex decision-making processes and providing diagnostic to the patient. Also, AI can make much more precise and accurate decisions about the therapy based on previously analyzed medical diagnostic procedures.
Logistics	In logistics activity, the focus is on costs and optimization. AI can be used for analyzing existing costs in the transportation and logistic system and for finding optimization opportunities in the logistic process. Furthermore, AI can be used for managing the automated system in the warehouse in which robots are transporting different kinds of goods. There is also the possibility of using AI in the managing stock in a warehouse that will as the result have decreasing costs related to the stocks.
Civil engineering	Usage of the AI in civil engineering is mostly related to creating a simulation of the planned structures and for complex mathematical calculations that are necessary for creating and building different kinds of structures. With the creation of the expert systems, AI can be used in the decision-making process and also for the optimizing design and construction of the buildings. Furthermore, there is also the possibility to use AI in managing vehicles in the construction yard as well as the usage of robots for conducting different operations in the building.
Managing and business	Most of the usage of AI is related to business and managing organizations. AI in the organization can be used for analyzing different kinds of data such as data that is describing environment in the which organization exist, analyzing different alternatives for finding one optimal, etc. Furthermore, AI can be used for creating and managing organizational knowledge with knowledge mining techniques. Also, AI can be used in different departments in the organization for different kinds of activities that are performing in such departments.

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