# Chapter 13 The Use of Blockchain Technology Tools in Modern Education Reduces the Likelihood of "Robotization" of People

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### ABSTRACT

There is a need to get into a "clearing house" to shed light on certain operational concepts in the question at hand: (1) modern; (2) education; (3) "robotize"/"robo tization"/"robotizing"; and (4) people. People. In the present discussion, "people" may not only refer to students in a situation of formal schooling. It generally refers to all learners under normal circumstances and this context is taken in the light of what is previously pointed out in #2 where the inclusive application of the term education is given emphasis. "Robotize"/"Robotization"/"Robotizing". It is a neologism or a coinage, if you will, which is derived from the term "robot". A robot is basically a human-programmed machine capable of automatically performing tasks both simple and complex. Education: In simple terms, education involves teaching (in all its forms, so that it could be a learner teaching her/himself or an entity other than the learner that is the source of matters to be learned).

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#### INTRODUCTION

Modern society's development is connected with the use of digital technologies in all spheres. Digital technology as a system of methods and techniques are focused on receipt, storage, processing, use and dissemination of information with the help of computers. Performance and versatility of this schema have made IT popular. The development of research methods based on digitalization in the field related to solving problems of improving the level and quality of human life is particularly relevant. Bioinformatics in this sense is one of the most promising areas of digital technology.

Bioinformatics (computational biology), which appeared at the intersection of molecular biology, genetics, mathematics and computer technologies, studies the sequences of nucleic acids in DNA/RNA or amino acids in proteins, their evolution, construction patterns, the relationship between the sequence of elements and the spatial structure of macromolecules, its physical properties and functions (T. Attwood, Parry D. Smith, 1999; A. Lesk, 2008). Bioinformatics as a synthesis of different sciences allows forming a new level of understanding biological processes occurring in cells and organisms. Various methods of applied mathematics, statistics and other exact sciences are used in bioinformatics.

One of the tasks of bioinformatics is processing a huge array of different biological data, identifying patterns that cannot always be seen in a conventional experiment, predicting the functions of genes and proteins encoded in them, building a model of gene interaction in the cell, drug designing. Using blockchain technology that can complement traditional methods of bioinformatics is of particular interest here.

#### BACKGROUND

Blockchain technology was proposed in 2008 by Satoshi Nakamoto. This technology was the basis of the first cryptocurrency, Bitcoin. The blockchain can be defined as a distributed decentralized database that continues to register data records confirmed by the respective nodes. All data is stored in a public ledger, which includes all registered transactions. The blockchain consists of a linked sequence of blocks containing transactions with timestamps that are protected by cryptography. Blockchain technology allows recording transactions continuously keeping them unchanged while providing constant updates. Accordingly, the blockchain is provided partly by the database, partly by the development platform and partly by the virtual network intermediary.

The main characteristics of any blockchain are:

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