

MEDICINE CUSTOMIZATION THROUGH BIGDATA INTEGRATION

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In the past few years, the BigData science has become very popular in many major sectors of human life, and medicine has not become an exception here. The BigData technology refers to a huge amount of a variety of digital data sets that are collected, processed, integrated into existing systems and analyzed. Important features of the BigData are:

- 1) size/scale in terms of volume and quantity from the processed information, speed, diversity;
- 2) innovative, diverse, multi-tasking, timeliness, dynamism;
- 3) complexity and heterogeneity (structured, unstructured, semi-structured databases);
- 4) the information exchange and confidentiality.

Health care and its subsidiary sciences began to use actively data, since medical research forms and uses large, complex, multidimensional and diverse data sets for specific areas. Using a predictive analysis, you can also make a calculation of costs that are associated with admission rates while at the same time contributing to a more efficient distribution of staff and the pharmaceutical capacity of health care facilities.

The main step in the patient treatment is the disease diagnosis, the result of which is the diagnosis and treatment is prescribed. Thanks to the introduction of digital hospital records and their entry into BigData, this data will be easily accessible to doctors in the form of structured forms that will allow to take patient care to a new level.

To date, the death of patients from medical errors is estimated in thousands around the world. Medical institutions do everything possible to avoid this but despite this mistakes are inevitable because medical professionals can prescribe wrong treatment, medication or prescribe a medicine of an erroneous dosage. At the same time, the use of the BigData can significantly reduce the likelihood of medical errors that can occur with any specialist. This became possible due to the fact that the BigDate technologies can be used to analyze user data and, therefore, customize not only the medicine but also recommend the procedures and their duration for every individual patient.

At the same time, this technology can authenticate data and indicate false prescriptions so it can eliminate the possibility of an error and is supposed to save the lives of patients. On the other hand, it can be argued that this type of software can be really effective for doctors who have a large number of patients, thereby reducing the burden on staff. Also in medical practice it is not uncommon when due to the similarity of symptoms or inexperience of a doctor it is difficult to establish the correct diagnosis and effective treatment of the disease. For such cases, the BigData technology can also be used which is capable of processing a large number of significant amounts of data within a few seconds, and the specialist will be able to

find the appropriate treatment for each condition. Thus, the technology can provide specific, individual solutions for individual cases.

The BigData can influence all areas of human life from social sciences to political sciences, from financial industry to business, from medical science to public health, from health care to genetics and from personalized medicine to patient / user-oriented results. The BigData technology and the related practices open up new opportunities and promising directions in medicine development.