

приводятся некоторые результаты оценки расхождений в возрасте геологических объектов при использовании двух изотопных методов одновременно, таких как U-Pb, Rb-Sr, Sm-Nd, Re-Os, Lu-Hf.

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DEVELOPMENT OF A WEB SERVICE FOR EVALUATION THE LEVEL OF HEALTH

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This thesis describes the relevance of the development, the basic principles, the mechanism of the web service and the prospects for its application.

Modern information technologies offer fundamentally new opportunities, including for medicine. The introduction of information technology into the work of the healthcare system promptly changes the methods of treatment and diagnostics, forms of doctors' interaction with patients and colleagues, the organization of treatment and restoration of health.

Alexander Ivanovich Vlasov, the director of the medical center «Valeoton», a practicing vertebrologist and manual therapist following these trends developed his own automated system for determining the rating of a person's health according to the CAI system – a comprehensive analysis of the individual. Based on this rating, personal recommendations are formulated for sports and improving health indicators.

Because of the analysis of the current level of public health, the quality of the provision of medical services and the interest of citizens in physical activities, the following problems were highlighted: on the one hand, without consulting a doctor you can not evaluate your health indicators and get recommendations for exercising. On the other hand, there is a lack of a system that allows you to centrally collect many medical data and conduct their analysis.

CAI system can be effectively used in all health checkups for people who regularly engage in physical training and sports, both professionally and beginners from an early age, in health groups, fitness clubs, etc. Also, regular analysis and monitoring can encourage people to improve their performance and, as a result, attract more people to sports. The system of accounts and the availability of a database will allow centralized

collection of a large amount of data. This will allow us to regularly assess the health of people, conduct analysis, monitor the dynamics.

For now we can say that there is no service that allows you to get a full integral assessment of your health. This development is unique in its kind and in terms of quality, completeness and functionality it allows to greatly exceed the existing solutions.

We considered the need for monitoring human health and changing the approach to this process. A minimum viable web service product is currently implemented.

Further plans include the introduction of the service as a tool for testing students in the process of physical training, which will also allow debugging and testing the stability of work under heavy load. Then the web service will function in a mode of free access for all comers that will allow to collect and analyze user data, and also to integrate this web service into the work of medical institutions.

DATA SEPARATION FOR TRAINING THE ARTIFICIAL NEURAL NETWORK TO SIMULATE THE SPATIAL DISTRIBUTION OF CHROMIUM IN THE SURFACE LAYER OF THE SOIL

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Abstract. An algorithm for dividing data into training and test subsamples to simulate the spatial distribution of chromium in the surface layer of the soil using artificial neural networks (ANN) was proposed. The algorithm takes into account the spatial inhomogeneity of the variable being modelled. The data was obtained during the soil screening on the urbanized area in Novyy Urengoy city. A model, which used controlled separation, had shown more accurate results.

When modelling the prediction of the spatial distribution of the trait, there are two main tasks. First, the choice of a model, which is capable of reproducing the picture of the spatial distribution of the trait with the sufficient accuracy. The accuracy of prediction obtained using ANN is often higher than that of other methods or expert predictions [1]. The ANN model can be applied to measured data obtained during monitoring and used to predict the content of pollutants in uncontrolled places [2, 3].

The second task is to ensure that the chosen model is able to fully realise all its capabilities. The accuracy of the model is largely depends on the correct learning procedure. One of the main way to improve the capabilities of the method is to optimise the procedure for dividing the sample into a training and test subsamples [4]. A random splitting method is commonly used but this approach has a number of weak points. In this work was used Spatial quoting of raw data, which consists of three steps: