Researchers of the Yandex Research laboratory have developed a new neural network architecture called TABM, designed to analyze tabular data. The system allows you to effectively process large arrays of information and build accurate forecasts, which is in demand in various fields – from medicine to business.

The technology has already been tested in international competitions on the KagGle platform. In one of the TABM projects, they used to predict the survival of patients after bone marrow transplantation. Developments based on this architecture brought the competition participants a prize fund of 60 thousand dollars.

A feature of TABM is the use of the models ensemble. Each neural network in the system conducts its own analysis, after which all results are averaged. This approach provides accuracy with relatively low costs of computing resources.

According to the results of tests at 46 different datasets, TABM showed high stability and on average took first place among competitors. At the same time, she was able to surpass classic algorithms – such as Catboost, XGBOOST and LightGBM – in accuracy and reliability.

The neural network code is already open for developers on GitHub, and a scientific article is available on the Arxiv platform.