

The press service of the Perm National Research Polytechnic University (PNIPU) reported that the university experts have developed a model for predicting the Bitcoin course, which analyzes not only financial indicators, but also the psychological state of the market. The system uses an index of fear and greed (FGI), calculated on the basis of news, social networks and investor behavior.

As the researchers explained, traditional prognostic methods do not work well with cryptocurrencies, since they strongly depend on the emotional background. The new neural network model showed 5-10% more accurate results compared to analogues that ignore the psychological factor.

The system was especially effective during periods of high volatility. For example, in November 2024, when Bitcoin first exceeded the mark of 100 thousand dollars, the forecast error was reduced by 8.3% due to the accounting of the FGI index.

To teach the neural network, scientists used 80% of the data, and the remaining 20% used to verify. The procedure was repeated 200 times, analyzing the information in small portions. This approach made it possible to achieve high accuracy of predictions.

The development has no Russian analogues and can be adapted for other cryptocurrencies and financial instruments.