Scientists from the Technion (Israel), together with colleagues from the United States, developed a Beast-GB computing model, capable of predicting people's solutions in conditions of uncertainty and risk. Development combines machine learning and theory of behavioral science.

BEAST-GB is based on a previously created Beast model based on psychological theories. It suggests that when choosing in risky situations, people use different strategies, for example, avoid immediate regret or try to minimize possible losses. Researchers translated these strategies into a set of "behavioral features" and combined them with objective characteristics of tasks. The data was processed using the Extreme Gradient Boosting algorithm, which gave the name of the new model.

Beast-GB showed high accuracy in forecasts. At the CPC18 competition in 2018, it took first place, predicting 93% of variations in the data, and in later tests with an increased sample – up to 96%. At the same time, the model was able to bypass dozens of other behavioral and purely machine models, showing accurate results even with a limited volume of training data.

The authors note that the Beast-GB not only predicts the choice of people, but also helps to understand what motives underlie these solutions. In the future, developers plan to test the model in real conditions together with state bodies and organizations that create programs to improve the quality of decisions made by people.