Specialists of the National Research University of MEPhI have developed a system for detecting fake voice records. A neural network called “Sipukha” analyzes audio signals and determines whether the voice is real or synthesized.

Development is based on the analysis of Kepstra coefficients – the mathematical characteristics of the sound. For the training of the system, more than 200 thousand records were used, including both real voices and diphs created by different algorithms.

Initially, the project began as an academic study in 2022, but with the spread of fraudulent schemes with fake voices, gained practical value. The system has already passed tests in the technological accelerator of MEFU and Rosatom, having become one of the best developments.

Now the team is working on creating a cloud service that can integrate with call centers and instant messengers. Several large Russian companies have already shown interest in technology.

The developers note that the neural network requires constant improvement, since the methods of creating dipfaces are continuously developing. The plans include the creation of a specialized laboratory to further improve the system. The project became the winner of the competition “Novator Moscow” and can receive support for the city authorities.

“Sipukha” got its name in honor of the bird with exceptional hearing.