In the press service of the Saratov State Technical University. Gagarina Yu. A. (SSTU) reported that university experts developed a system for identifying drones on acoustic signals. The new technology works effectively in urban conditions with poor visibility and strong background noise.

As the author of the project, Sergei Kuznetsov, explained, traditional methods of detecting drones are often ineffective. In contrast, acoustic analysis allows you to identify the UAV, regardless of visibility and does not require complex equipment.

The system uses a hybrid approach that combines a frequency-temporal analysis of sound with deep learning algorithms. To increase the accuracy of recognition, the techniques of data augmentation and transfer learning were used, which helped the system to distinguish characteristic sound patterns even with strong interference.

Testing confirmed the performance of technology in the urban environment. Development can integrate into the existing safety infrastructure and use standard equipment.

According to the developers, the system is able to adapt to new drones models. This is especially important in conditions of constant expansion of the functionality of drones and the associated risks of their unauthorized use.