

Approaches to the analysis of experimental data on small laboratory animals

Monday 28 October 2024 16:45 (15 minutes)

Conducting research on the morphofunctional state of the central nervous system of small laboratory animals, it is necessary to create a convenient environment for data analysis, including one that allows automating the routine stages of their processing. Conducting behavioral experiments, researchers face the problem of incorrect detection of an animal in a behavioral test system or maze when using existing software, as well as the task of recognizing individual behavioral patterns on the received videos. The latter is performed manually by experts, which requires a lot of time. The solution to this problem is based on the use of machine learning and computer vision algorithms. The problem of automating the stage of morphological analysis of photographic images of histological slides of the brain is solved using computer vision algorithms and a neural network approach.

The research was carried out within the state assignment of Ministry of Science and Higher Education of the Russian Federation (theme No. 124092700007-4)

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Session Classification: Information Technology

Track Classification: Information Technology