DEVELOPMENT OF A FIRE SAFETY MONITORING SYSTEM FOR FORESTRY

Qikang, Lu, Liubchenko, N., Podorozhniak, A.
National Technical University «Kharkiv Polytechnic Institute», Kharkiv

Management of forestry today requires the use of advanced technologies and innovative solutions [1]. One of the important tasks of forestry management is round-the-clock monitoring for the detection and prevention of forest fires, the creation of fire barriers in the forest, the drawing up of plans for fire prevention measures and the elimination of fires, and the introduction of fire-hazardous periods [2].

Therefore, a system of operational detection of fire-prone forest areas is necessary. For this, it is expedient to use data obtained from satellites of remote sensing of the Earth, which will reduce the economic costs of using traditional means of monitoring the terrain and increase the accuracy of timely detection of fire-prone forest areas [3].

Deep learning is a branch of artificial intelligence that has proven to be very effective in processing and analyzing large data sets. Therefore, the task of using convolutional neural networks to study the fire hazard of forest areas in the context of the problem of forest fire monitoring and prevention is relevant [4, 5].

This work is devoted to the study of the possibility of applying deep learning neural networks for monitoring fire-prone forest areas based on multispectral images of remote sensing of the Earth.

In the future, it is planned to apply the obtained research results for implementation in automated forestry management systems using data from multispectral remote sensing of the Earth's surface in order to prevent and detect forest fires.

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