

Investigation of the Neural Networks Effectiveness in Recognizing Moving Drones

Oleg Zubkov

Kharkiv National University of Radio Electronics
Kharkiv, Ukraine

Sergiy Sheiko

Kharkiv National University of Radio Electronics
Kharkiv, Ukraine

Vladimir Oleynikov

Kharkiv National University of Radio Electronics
Kharkiv, Ukraine

Vladimir Kartashov

Kharkiv National University of Radio Electronics
Kharkiv, Ukraine

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Abstract—The aim of the work was to study the recognition efficiency of a moving unmanned aerial vehicle (drone) using various neural networks. Models of fully connected and convolutional neural networks had been created and trained making it possible to classify 12 types of moving objects. Sets of images, such as drones, fragments of tree foliage, grass, clouds and insects had been created to train neural networks. The results of the work are: recommendations for choosing the type and structure of the neural network, estimation of the recognition range for high-resolution images.

Keywords—neural network, drone, motion detection, convolutional network, video stream, dataset.

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