

ABSTRACT

Diploma work: 88 p., 8 tabl., 22 fig, 2 appendixes, 10 sources.

The purpose of given paper is to develop a software product to classify painting style with neural networks.

In this paper have been investigated various methods of image classification, we analyzed fundamental mathematical structures on which based neural networks, and the most common construction concepts of existing algorithms.

The result of the work is a qualitative analysis of the effectiveness of existing implementations algorithms for image classification and development of our own modification of the neural network VGG16. As a result, we have a software module to launch the implementation of the Python classification algorithm with using the Keras library.

COMPUTER VISION, CLASSIFICATION, CONVOLUTIONAL NEURAL NETWORKS, VGG16, TENSORFLOW.