

ABSTRACT

Thesis contains: 108 p., 6 tables, 50 fig., 2 add. and 22 references.

MACHINE LEARNING, DEEPLARNING, CLASSIFICATION, MULTICLASS PROBLEM, COMPUTER VISION, ARTIFICIAL NEURAL NETWORK, MOBILE PLATFORM.

The object of the study are the methods of machine learning and the available technical tools for "computer vision".

Subject of research - models based on deep learning, convolutional neural networks, recurrent neural networks.

The purpose of the thesis - with the help of modern systems of deep learning to create a model that can accurately classify mushrooms to a certain type by images with help of modern systems of deep learning; to build an intelligent mobile service that will use this model, as well as be simple and easy to use.

The paper analyzes existing models to solve the problem of classification, problems of computer vision; Their comparative analysis was carried out, the construction of the model for solving the problem of visual recognition was described, and the process of integration of the intellectual model into a product designed for the mobile platform was described.

In the course of further research it is expedient to create an intellectual model that will provide better accuracy by increasing the training sample, or change the architecture of the model entirely. It is also advisable to continue developing the software product, increase the informative interface.