

Abstract

This thesis consists of 66 pages, 17 illustrations, 12 formulas, 9 literary sources.

Key words: neural network, online service, python, pneumonia, x-ray.

In the diploma project, a new method for diagnosing lung disease on the basis of X-ray images was conducted.

The design of the neural network architecture is developed. The model was trained to recognize viral and bacterial pneumonia in X-rays. An online service was developed that provides real-time, convenient and easy access to the capabilities of the neural network.

As a result of the study, a ready-made solution for modern diagnostics was developed on the basis of latest neural network technology.

The **purpose of the work** is to investigate the high-precision method of diagnosing lung diseases on the basis of X-ray images. Also, to development an online interface for easy access in real time and documentation for it

The **object of the study** is the human chest, in particular the lungs

Subject of research - methods of diagnostics based on non-network technologies

Scientific novelty - the newest diagnostic method of lung disease on the basis of X-ray images.