ABSTRACT

Master's thesis: 97 p., 33 fig., 22 tabl., 29 ref., 2 appendixes.

Object of research: an algorithm for automatic face recognition and blur.

Subject of study: face recognition in the image.

Objectives of the study: creation of an automatic face recognition and saponification system.

Tasks of the work: to develop a system using one of the modern methods of face recognition that could recognize the faces of people in real time in the video stream and automatically blur them.

During the work, the analysis of modern methods of face recognition was performed, the method was chosen using the neural network, namely the previously trained FaceNet model, as the most accurate and fastest model. OpenCV was selected as the most flexible and fastest computer vision library for streaming video.

A system has been developed for recognizing and blurring faces in a video stream that accomplishes the task.

The urgency of the project is motivated by the lack of similar solutions and potential interest from the business.

The results of the work can be used by both commercial organizations and enthusiasts seeking to develop something similar.

VIDEO ANALYSIS, AUTOMATIC FACE RECOGNITION, PYTHON, TENSORFLOW, KERAS, ONNX, CNN, FACENET, GOOGLENET.