ABSTRACT

Topic relevance: the need to recognize unwanted people and the age, gender and emotional state of visitors of retail locations from photos and videos from surveillance cameras.

Research purpose: to analyze the methods of identification of persons by photos and videos and to obtain their biometric portrait.

To achieve this goal, **the following tasks** were formulated: research of existing ways of identifying persons and their biometric pattern in queuing; study of existing technical means of identification of persons; selection of the backbone architecture for the neural network recognition model; selection of training datasets for training model recognition; development of software that uses a designed recognition model; comparison of the results of the implemented model with the existing means of identification of persons.

Research object: the process of identifying a person by face and obtaining his biometric template using machine learning methods.

Research subject: the accuracy and effectiveness of computer vision algorithms for processing multiple-person photos and videos.

Research methods: research, analysis, experiment.

Scientific Novelty: the most significant scientific result of a master's thesis is the implementation of a unique software module for identifying individuals and obtaining their biometric template using modern computer vision algorithms.

The practical significance of the results obtained is determined by the fact that the proposed algorithmic and software solution can be used in queuing facilities to identify criminals and emotional state of visitors.

Relationship with working with scientific programs, plans, topics:

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