

Student's Zone 2020 of the NICA Project



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Type: **not specified**

Automatic face detection

The task is to prepare the software for an automatic face recognition. The task should be done in the C++ programming language with use of the OpenCV library.

Required basic C++ knowledge. General knowledge of digital image processing algorithms can be helpful as well as knowledge of the OpenCV library, however it is not necessary. The task at the initial stage will be realised by utilizing the camera connected to the computer. It can be builtin laptop camera. Also, for better results tests can be performed on a recorded video of higher quality.

The task can be separated to few parts:

1. Installing the OpenCV library
2. Preprocessing the acquired image
3. Face detection
4. Storing the detected face
5. Recognizing the face by comparing with the saved examples with use of neural networks

Such software can be utilized in variety of safety systems which can store and/or recognize faces of the people entering the crucial areas.

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