POLI TECHNIKA Czestochowa University of Technology

Faculty of Mechanical Engineering and Computer Science

Computer vision, pattern recognition and image retrieval

Project v.II

As part of laboratory classes in the "Computer vision, pattern recognition, and image retrieval" course, each student must prepare a project on their own.

Project guidelines

Please, as part of the project, develop an application in the Matlab environment with the use of a graphical user interface. The application should have a specific purpose, for example: object detection in digital images, improvement of digital image quality, achieving interesting graphic effects on digital images, or others. Each application should perform transformations on arbitrary digital images suitable for its intended purpose. I give you the opportunity to independently choose a leading theme for the application.

- The application should be prepared in an aesthetically pleasing and interesting manner.

- Please select transformations that are appropriate for realizing the chosen theme.

- The application should have at least 20 different transformations programmed for digital images.

- Please provide appropriate safeguards for individual transformations (such as default values or allowable ranges of values)..

Documentation guidelines

Please prepare documentation in the form of a .pdf file for the application. It should include the following elements:

- Leading theme of the application
- Introduction containing a description of the purpose of the application and its assumptions.
- Description of each prepared functionality along with examples of their use (screen capture with the results of using individual buttons).
- Source code of the entire application (pasted as text into the document file).
- Summary and conclusions from the implementation of this application.

Passing condition

To obtain credit for the project, the documentation must be sent as an answer via the e-learning platform in theas two files: Project.mlapp and Documentation.pdf.

The project developed in the Matlab environment should be delivered and presented to stationary laboratory classes.

NOTE Each student develops the project individually. I do not allow the possibility of accepting two identical projects.

First deadline for submitting the project: January 15, 2024.

The second (last) deadline for submitting the project: January 22, 2024.