



Image Analysis and Computer Vision

Instruction for project execution

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1 What to have

To execute the program, the user must have downloaded the project folder containing the **code** folder and the **video** folder.

2 How to execute

1. Open a shell (i.g. CMD).
2. Go in the **code** directory.
3. Type the instruction:

```
python main.py <video_name.mp4>
```

to execute the program with as input video the one specified by video_name.mp4, that must be located in the **video** folder inside the project directory, **without** the visualization of the ROI.

Type the instruction:

```
python main.py -d <video_name.mp4>
```

to execute the program with as input video the one specified by video_name.mp4, that must be located in the **video** folder inside the project directory, **with** the visualization of the ROI.

3 How to change parameters

- In order to change the **ROI dimension**, open the file named PerspectiveTransformation.py, that is inside the code directory, and modify the variables at lines 14 to 19.
- In order to modify the **thresholding parameters**, open the file named Thresholding.py, that is inside the code directory, and modify the variables at lines 23 to 37.

4 Video selection

Videos that resulted in a **good and acceptable** execution:

- With the default parameters:
 - 20230317_151040.mp4
 - 20230317_145749.mp4
 - 20230317_150849.mp4
- With parameter **clip_size=2.0**:
 - 20230303_151722.mp4
- With parameter **clip_size=3.0**:
 - 20230303_145525 tagliato.mp4
 - 20230303_145747.mp4