

OpenCV – Operators

Introduction

For this lecture you will use the code wrote in “OpenCV – Multiple Inheritance and Polymorphism”

Reading material

- C++ - Overloading

Exercise 1: Local operator

Redefine as member functions in *psr::BlurFiltering* and *psrs::EdgeDetector* classes the following operators:

- Operator =
- Operator (i,j)
- Operator [index]

Transfer these operators in the *class Base* (make these operators virtual pure).

Exercise 2: Global operator

Transform your code to make it able to execute the following main function:

```
int main ( void )
{
    // read an image in source
    cv::Mat source = imread("test.png", CV_LOAD_IMAGE_UNCHANGED);

    psr::BlurFiltering blurFiltering;
    psrs::EdgeDetector edgeDetector;

    edgeDetector.setProcess ( SOBEL );
    blurFiltering.setProcess ( GAUSSIAN );

    source >> edgeDetector >> blurFiltering;
    cout << blurFiltering; // display the text "Gaussian" in the console.

    // display blurFiltering result
    namedWindow( blurFiltering.getOpenCVProcessName(), CV_WINDOW_AUTOSIZE);
    imshow(blurFiltering.getOpenCVProcessName(), blurFiltering);

    waitKey(0); //wait infinite time for a keypress

    return 0;
}
```

You will have to redefine globally the:

- >> operator : this redefinition must use *class Base* as type for the parameters.
- << operator