

OpenCV Reference

➤ Useful Member Functions

1) **cv::Mat cv::imread (const string & filename, int flags = IMREAD_COLOR_BGR)**

This function loads an image from the specified file and returns OpenCV matrix. If the image cannot be read (because of a missing file, improper permissions, or unsupported/invalid format), the function returns an empty matrix.

Parameters:

filename : Name of the file to be loaded.
flags : Imread flags (Described in Table 1)

Return value : It returns OpenCV matrix (**cv::Mat**)

Sr. No	Flag	Reading functionality
1	IMREAD_UNCHANGED	If set, return the loaded image as it is
2	IMREAD_GRAYSCALE	If set, always convert image to the single channel grayscale image.
3	IMREAD_COLOR_BGR	If set, always convert image to the 3 channel BGR color image.
4	IMREAD_COLOR_RGB	If set, always convert image to the 3 channel RGB color image.
5	IMREAD_ANYCOLOR	If set, the image is read in any possible color format.

Table 1 : Some of the possible flags for Imread flags

There are a lot of flags available in OpenCV but for character recognition project these flags are a useful subset.

2) **Bool cv::Mat::empty()**

Returns true if the array has no elements.

3) type_name cv::Mat::at<type_name>(int row, int col)

It returns the element present at specified row & col position. It is the template function so type_name must be provided while accessing the element.

Parameter:

row : Index along the dimension 0

col : Index along the dimension 1

➤ **Useful fields:**

1) cv::Mat::rows

return the number of rows of matrix or (-1, -1) when the matrix has more than 2 dimensions

2) cv::Mat::cols

return the number of columns of matrix or (-1, -1) when the matrix has more than 2 dimensions