# OpenCV中计算指定bins数的直方图

其实这个问题很简单，但是因为常常不知道怎么做，特别写下来，以供以后参考。

代码如下：

#include "stdafx.h"

#include <opencv2\opencv.hpp>

using namespace *std*;

using namespace *cv*;

void drawHist(*Mat*& im, *MatND* hist)

{

double minValue = 0;

double maxValue = 0;

im = *Mat*(*Size*(512, 512), *CV\_8UC3*, *Scalar*(0, 0, 0));

*minMaxLoc*(hist, &minValue, &maxValue, 0, 0);

int hpt = *saturate\_cast*<int>(0.9 \* 512);

int bins = hist.*rows*;

int space = 512 / bins;

for (int i = 0; i < bins; i++)

{

float binValue = hist.*at*<float>(i);

int realValue = *saturate\_cast*<int>(binValue\*hpt / maxValue);

*rectangle*(im, *Point*(i \* space, 512), *Point*((i + 1) \* space - 1, 512 - realValue), *Scalar*(0, 255, 0), -1);

}

}

void caluHistogram(*Mat*& gray, *MatND*& hist, int bins)

{

//准备参数

int channels = 0;

//直方图的维度

int dims = 1;

//直方图的范围

float hranges[] = { 0, 255 };

const float \*ranges[] = { hranges };

//计算直方图

*calcHist*(&gray, 1, &channels, *Mat*(), hist, dims, &bins, ranges);

}

int *\_tmain*(int argc, *\_TCHAR*\* argv[])

{

*Mat* im = *imread*("1.jpg",0);

if (im.*data*)

{

*MatND* hist1,hist2;

*Mat* histIm1,histIm2;

caluHistogram(im, hist1, 256);

caluHistogram(im, hist2, 16);

drawHist(histIm1, hist1);

drawHist(histIm2, hist2);

*imshow*("hist1", histIm1);

*imshow*("hist2", histIm2);

*imshow*("src", im);

*waitKey*(0);

}

return 0;

}

效果：



