

Python3 OpenCV3.3图像处理教程

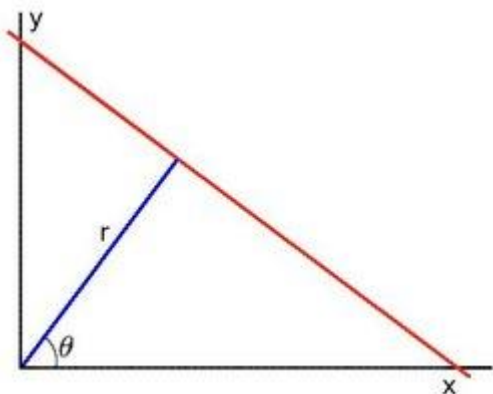
– 贾志刚

直线检测

- ▶ 霍夫直线变换介绍
- ▶ 相关API代码演示

霍夫直线变换介绍

- ▶ **Hough Line Transform** 用来做直线检测
- ▶ 前提条件 - 边缘检测已经完成
- ▶ 平面空间到极坐标空间转换

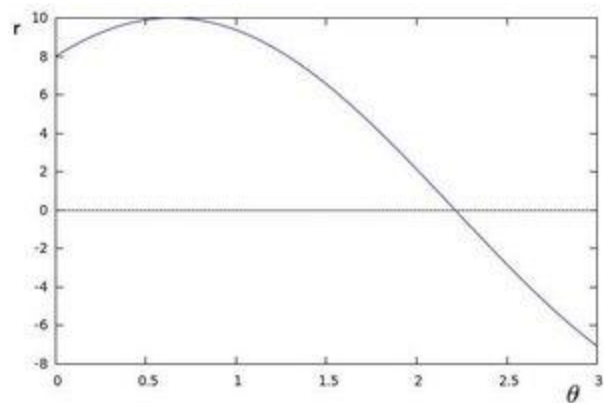


$$x = r \cos \theta, y = r \sin \theta$$

$$r^2 = x^2 + y^2, \tan \theta = y/x \quad (x \neq 0)$$

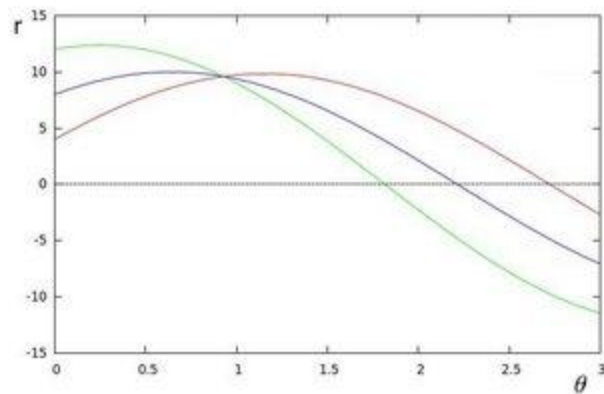
霍夫直线变换介绍

$$y = \left(-\frac{\cos \theta}{\sin \theta} \right) x + \left(\frac{r}{\sin \theta} \right)$$

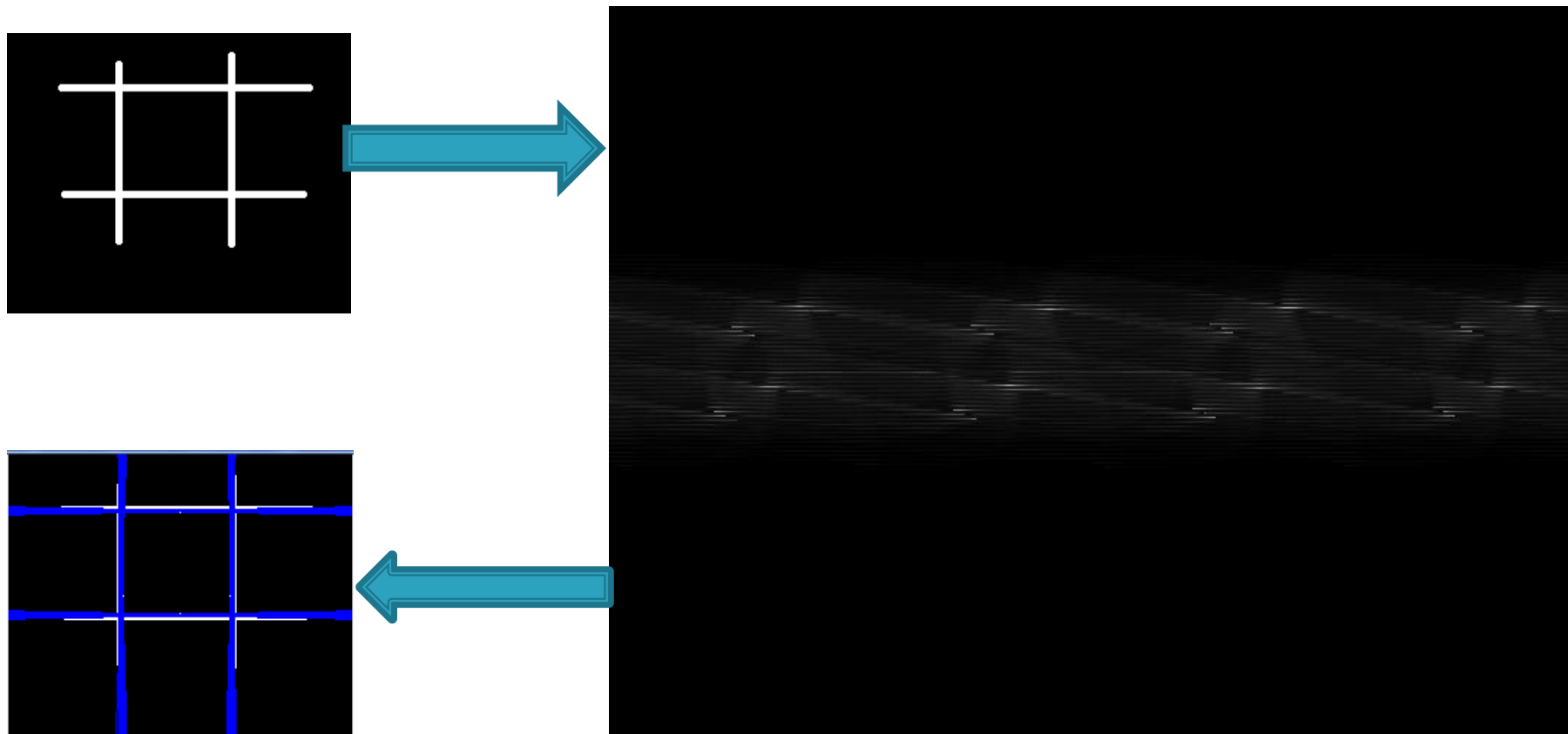


$$r = x \cos \theta + y \sin \theta$$

$$r_{\theta} = x_0 \cdot \cos \theta + y_0 \cdot \sin \theta$$



霍夫直线变换图示



代码层面知识点

- ▶ API使用与演示



Thank You