

<<学习OpenCV>>

图书基本信息

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内容概要

《学习OpenCV》将你置身于迅速发展的计算机视觉领域。

本书作者是免费开源OpenCV的发起人，这本书为你介绍了计算机视觉，例证了如何迅速建立使计算机能“看”的应用程序，以及如何基于计算机获取的数据作出决策。

计算机视觉几乎随处可见：安全系统、管理检验系统、医学图像分析、无人机等。

它将Google地图和Google地球结合在一起，在LCD屏幕上核对像素，确保衬衫上的每一个针脚都完全缝合。

OpenCV提供了一个简易实用的计算机视觉框架以及一个含有超过500种可以实时运行视觉代码的函数的综合库。

《学习OpenCV》在每一章里教授任何OpenCV的开发者或热爱者如何在这些实战经验的帮助下迅速掌握该软件。

这本书包括了如下内容：对OpenCV全面详尽的介绍 从照相机中导入图片 转换图像 分割图像和形状匹配 模式识别，包括人脸检测 两到三个计量单位间的跟踪和运动 立体视觉中的3D再现 机器学习算法 使机器能看见是一个具有挑战却又充满乐趣的目标。

无论你是想建立一个简单的还是复杂的视觉应用程序，《学习OpenCV》都是你入门的必备教材。

作者简介

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Chapter 1 Overview What Is OpenCV? OpenCV [OpenCV] is an open source (see <http://opensource.org>) computer vision library available from <http://SourceForge.net/projects/opencvlibrary>. The library is written in C and C++ and runs under Linux, Windows and Mac OS X. There is active development on interfaces for Python, Ruby, Matlab, and other languages. OpenCV was designed for computational efficiency and with a strong focus on realtime applications. OpenCV is written in optimized C and can take advantage of multicore processors. If you desire further automatic optimization on Intel architectures [Intel], you can buy Intel's Integrated Performance Primitives (IPP) libraries [IPP], which consist of low-level optimized routines in many different algorithmic areas. OpenCV automatically uses the appropriate IPP library at runtime if that library is installed. One of OpenCV's goals is to provide a simple-to-use computer vision infrastructure that helps people build fairly sophisticated vision applications quickly. The OpenCV library contains over 500 functions that span many areas in vision,

including factory product inspection, medical imaging, security, user interface, camera calibration, stereo vision, and robotics. Because computer vision and machine learning often go hand-in-hand, OpenCV also contains a full, general-purpose Machine Learning Library (MLL). This sublibrary is focused on statistical pattern recognition and clustering. The MLL is highly useful for the vision tasks that are at the core of OpenCV's mission, but it is general enough to be used for any machine learning problem. Who Uses OpenCV? Most computer scientists and practical programmers are aware of some facet of the role that computer vision plays. But few people are aware of all the ways in which computer vision is used. For example, most people are somewhat aware of its use in surveillance, and many also know that it is increasingly being used for images and video on the Web. A few have seen some use of computer vision in game interfaces.

媒体关注与评论

“这本宝库对专业人员来讲非常有用，对初涉这个领域的人们也是个绝好的工具。像其宣传的那样，它是一组计算机视觉算法。

” ——William T. Freeman. 麻省理工学院计算机科学与人工智能实验室 “《学习OpenCV》即将占据每从从事计算机视觉领域的人的书架上最显著的一处。

” ——David Lowe, 英属哥

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