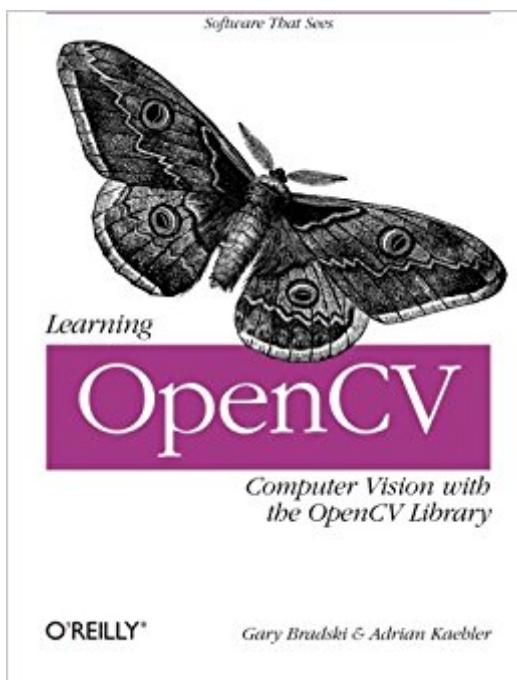The book was found

Learning OpenCV: Computer Vision With The OpenCV Library

Synopsis

"This library is useful for practitioners, and is an excellent tool for those entering the field: it is a set of computer vision algorithms that work as advertised."-William T. Freeman, Computer Science and Artificial Intelligence Laboratory, Massachusetts Institute of Technology Learning OpenCV puts you in the middle of the rapidly expanding field of computer vision. Written by the creators of the free open source OpenCV library, this book introduces you to computer vision and demonstrates how you can quickly build applications that enable computers to "see" and make decisions based on that data. Computer vision is everywhere-in security systems, manufacturing inspection systems, medical image analysis, Unmanned Aerial Vehicles, and more. It stitches Google maps and Google Earth together, checks the pixels on LCD screens, and makes sure the stitches in your shirt are sewn properly. OpenCV provides an easy-to-use computer vision framework and a comprehensive library with more than 500 functions that can run vision code in real time. Learning OpenCV will teach any developer or hobbyist to use the framework quickly with the help of hands-on exercises in each chapter. This book includes:A thorough introduction to OpenCVGetting input from camerasTransforming imagesSegmenting images and shape matchingPattern recognition, including face detectionTracking and motion in 2 and 3 dimensions3D reconstruction from stereo visionMachine learning algorithmsGetting machines to see is a challenging but entertaining goal. Whether you want to build simple or sophisticated vision applications, Learning OpenCV is the book you need to get started.

Book Information

Paperback: 555 pages

Publisher: O'Reilly Media; 1st edition (October 4, 2008)

Language: English

ISBN-10: 0596516134

ISBN-13: 978-0596516130

Product Dimensions: 7 x 1.2 x 9.2 inches

Shipping Weight: 1.7 pounds (View shipping rates and policies)

Average Customer Review: 4.2 out of 5 starsÂ Â See all reviewsÂ (49 customer reviews)

Best Sellers Rank: #215,363 in Books (See Top 100 in Books)   #9 inÂ Books > Computers & Technology > Hardware & DIY > Microprocessors & System Design > DSPs   #32 inÂ Books > Computers & Technology > Computer Science > AI & Machine Learning > Computer Vision & Pattern Recognition   #47 inÂ Books > Computers & Technology > Programming > Languages &

Customer Reviews

This book is excellent at exposing the reader to the various methods available in OpenCV and showing via code examples how to use each one. The author also gives you the website where you can look at the actual source code of each method shown. This is helpful since, for example, if you want to know exactly how the code is going about calculating the Fundamental Matrix, it is difficult to determine this by reading the book alone.This book would be most useful to someone who already has a fundamental understanding of computer vision and image processing and wants to see how OpenCV will make their programming tasks easier. It does this by coding up well known algorithms into reliable pieces of code that you can use to accomplish more complex tasks. Do not come to this book if you are seeking to learn computer vision. You will only be confused as the author does not offer enough detail to teach you the mathematical foundations. However, I don't think that was his intention at all. Instead it is part user manual, part basic computer vision tutorial and overview, and part idea book. Each chapter is supplemented with excellent and interesting programming exercises that test your knowledge of what has been presented in a practical setting.For a good basic understanding of computer vision try Computer Vision. To understand the algorithmic underpinnings of 3D computer vision try Introductory Techniques for 3-D Computer Vision.

As a computer instructor and researcher in biometrics and pattern recognition, I welcome this treatise on OpenCV.Don't even consider opening the pages unless you are familiar with C, its use of structs, pointers, callback functions and the like. You may also be put off by the various mathematical discussions of various advanced computer vision algorithms that have been developed over the last two decades.OpenCV is an open-source collaborative work. It's partially supported by the Intel corporation, through their quest for advanced algorithms that might be included in its computer chips. Many low-level tools needed for video and image processing are now provided in advanced Intel microprocessors.The theme of OpenCV is audacious, yet achievable -- that of providing high-quality, high-performance software tools for the many computer vision algorithms that have been published over the years. That has largely been achieved through the clever use of low-level pointer-based tools, accompanied by complete C source code for everything down to the raw processor instructions.Other good news is that the system provides an easy portal to advanced Intel hardware support, boosting performance to the highest possible level. One can also port OpenCV-based code to Linux, other Unix and Mac platforms -- it is not restricted

to Windows.I've had some trouble with Windows XP, but the image and camera grabbing functions work well under Windows Vista. I've also been able to exploit the OpenCV tools under Windows MFC to support Windows-based applications.This O'Reilly book provides the background support that you will need to download the OpenCV system from the internet, configure your development environment and start exploring the magic that its tools can provide.

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