

Unlock the Power of Computer Vision with OpenCV's Second Edition Cookbook

Are you ready to delve into the fascinating world of computer vision and explore its limitless possibilities? Look no further! The OpenCV Computer Vision Application Programming Cookbook, now in its second edition, is here to guide you through the process of building your own computer vision applications.

Computer vision has revolutionized countless industries, from healthcare and agriculture to surveillance and self-driving cars. With the OpenCV library, an open-source computer vision and machine learning software, you can harness the power of image and video processing to create intelligent applications.

OpenCV Computer Vision Application Programming Cookbook, Second Edition, is your comprehensive guide to mastering the intricacies of OpenCV and unleashing its potential. Written by Robert Laganière, a renowned computer vision expert, this book provides you with step-by-step instructions and practical techniques to dive deep into the world of computer vision programming.



OpenCV Computer Vision Application Programming Cookbook Second Edition

by Kayti Nika Raet(2nd New edition, Kindle Edition)

★★★★☆ 4 out of 5

Language : English
File size : 11095 KB
Text-to-Speech : Enabled
Enhanced typesetting : Enabled
Print length : 376 pages
Screen Reader : Supported



What Does This Book Offer?

This cookbook covers a wide range of computer vision topics, giving you the tools and knowledge to tackle any project. Whether you are a beginner or an experienced programmer, the book starts with the basics and gradually progresses to more advanced topics, allowing you to build a solid foundation.

Here are some key features you'll find in this book:

- Over 50 recipes covering various computer vision algorithms and techniques
- Detailed explanations with code samples and illustrations
- Hands-on projects that will enhance your understanding of computer vision concepts
- Insightful tips and tricks from the author's professional experience
- Integration of OpenCV with other popular libraries, such as NumPy and matplotlib

What Will You Learn?

By the end of this book, you will have the skills to develop your own computer vision applications with OpenCV. Some of the exciting topics covered include:

Face and feature detection:

Learn how to detect and recognize faces in images and videos. Discover techniques for identifying key facial features such as eyes, nose, and mouth.

Object detection and tracking:

Master the art of detecting and tracking objects within images or videos. From motion-based tracking to object recognition, you will gain an understanding of various techniques.

Image processing:

Explore techniques for manipulating and enhancing images using OpenCV. Learn how to perform tasks such as blurring, sharpening, color adjustment, and noise reduction.

Machine learning with OpenCV:

Discover how to leverage machine learning algorithms to train models for object recognition, classification, and more. Learn how to implement support vector machines, decision trees, and neural networks.

Augmented reality:

Dive into the exciting world of augmented reality and learn how to create applications that overlay digital content onto the real world using OpenCV.

Why Should You Choose This Book?

This second edition of the OpenCV Computer Vision Application Programming Cookbook offers a wealth of knowledge and practical guidance for aspiring developers and computer vision enthusiasts. Here's why you should get your hands on this book:

Comprehensive Coverage:

With over 50 recipes covering various computer vision topics, you will develop a deep understanding of OpenCV and its practical applications. Each recipe is accompanied by detailed explanations and code samples.

Progressive Learning:

Whether you're a beginner or an experienced programmer, this book offers an incremental learning curve. Start with the basics and gradually move towards more complex topics, allowing you to build your skills at your own pace.

Real-World Projects:

This book doesn't just provide theoretical knowledge; it encourages hands-on learning through real-world projects. Gain practical experience by implementing various computer vision techniques and algorithms.

Expert Author:

Robert Laganière, the author of this book, is a renowned computer vision expert with years of experience in academia and industry. His insights and tips will help you navigate the world of computer vision programming with ease.

With the power of computer vision and OpenCV at your fingertips, the possibilities are endless. The OpenCV Computer Vision Application Programming Cookbook, Second Edition, equips you with the knowledge and tools to bring your ideas to life. Start your journey into the world of computer vision today and unlock a world of opportunities!



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Over 50 recipes to help you build computer vision applications in C++ using the OpenCV library

About This Book

- Master OpenCV, the open source library of the computer vision community
- Master fundamental concepts in computer vision and image processing
- Learn the important classes and functions of OpenCV with complete working examples applied on real images

Who This Book Is For

OpenCV 3 Computer Vision Application Programming Cookbook is appropriate for novice C++ programmers who want to learn how to use the OpenCV library to build computer vision applications. It is also suitable for professional software developers wishing to be introduced to the concepts of computer vision programming. It can also be used as a companion book in a university-level computer vision courses. It constitutes an excellent reference for graduate students and researchers in image processing and computer vision.

What You Will Learn

- Install and create a program using the OpenCV library
- Process an image by manipulating its pixels
- Analyze an image using histograms

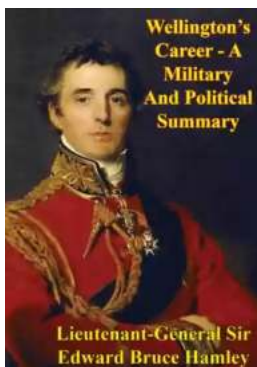
- Segment images into homogenous regions and extract meaningful objects
- Apply image filters to enhance image content
- Exploit image geometry in order to relate different views of a pictured scene
- Calibrate the camera from different image observations
- Detect faces and people in images using machine learning techniques

In Detail

OpenCV Computer Vision Application Programming Cookbook Second Edition is your guide to the development of computer vision applications.

The book shows you how to install and deploy the OpenCV library to write an effective computer vision application. Different techniques for image enhancement, pixel manipulation, and shape analysis will be presented. You will also learn how to process video from files or cameras and detect and track moving objects. You will also be introduced to recent approaches in machine learning and object classification.

This book is a comprehensive reference guide that exposes you to practical and fundamental computer vision concepts, illustrated by extensive examples.



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