OpenCV: Computer Vision Projects with Python

Joseph Howse, Prateek Joshi, Michael Beyeler

OpenCV: Computer Vision Projects with Python

Joseph Howse, Prateek Joshi, Michael Beyeler

OpenCV: Computer Vision Projects with Python Joseph Howse, Prateek Joshi, Michael Beyeler

Get savvy with OpenCV and actualize cool computer vision applications

About This Book

- Use OpenCV's Python bindings to capture video, manipulate images, and track objects
- Learn about the different functions of OpenCV and their actual implementations.
- Develop a series of intermediate to advanced projects using OpenCV and Python

Who This Book Is For

This learning path is for someone who has a working knowledge of Python and wants to try out OpenCV. This Learning Path will take you from a beginner to an expert in computer vision applications using OpenCV. OpenCV's application are humongous and this Learning Path is the best resource to get yourself acquainted thoroughly with OpenCV.

What You Will Learn

- Install OpenCV and related software such as Python, NumPy, SciPy, OpenNI, and SensorKinect - all on Windows, Mac or Ubuntu
- Apply "curves" and other color transformations to simulate the look of old photos, movies, or video games
- Apply geometric transformations to images, perform image filtering, and convert an image into a cartoon-like image
- Recognize hand gestures in real time and perform hand-shape analysis based on the output of a Microsoft Kinect sensor
- Reconstruct a 3D real-world scene from 2D camera motion and common camera reprojection techniques
- Detect and recognize street signs using a cascade classifier and support vector machines (SVMs)
- Identify emotional expressions in human faces using convolutional neural networks (CNNs) and SVMs
- Strengthen your OpenCV2 skills and learn how to use new OpenCV3 features

In Detail

OpenCV is a state-of-art computer vision library that allows a great variety of image and video processing operations. OpenCV for Python enables us to run computer vision algorithms in real time. This learning path proposes to teach the following topics. First, we will learn how to get started with OpenCV and OpenCV3's Python API, and develop a computer vision application that tracks body parts. Then, we will build amazing intermediate-level computer vision applications such as making an object disappear from an image, identifying different shapes, reconstructing a 3D map from images , and building an augmented reality application, Finally, we'll move to more advanced projects such as hand gesture recognition, tracking visually salient objects, as well as recognizing traffic signs and emotions on faces using support vector machines and multi-layer perceptrons respectively.

This Learning Path combines some of the best that Packt has to offer in one complete, curated package. It includes content from the following Packt products:

- OpenCV Computer Vision with Python by Joseph Howse
- OpenCV with Python By Example by Prateek Joshi
- OpenCV with Python Blueprints by Michael Beyeler

Style and approach

This course aims to create a smooth learning path that will teach you how to get started with will learn how to get started with OpenCV and OpenCV 3's Python API, and develop superb computer vision applications. Through this comprehensive course, you'll learn to create computer vision applications from scratch to finish and more!.

Download and Read Free Online OpenCV: Computer Vision Projects with Python Joseph Howse, Prateek Joshi, Michael Beyeler

---

From reader reviews:

Allison Phelps:

Within other case, little men and women like to read book OpenCV: Computer Vision Projects with Python. You can choose the best book if you appreciate reading a book. So long as we know about how is important the book OpenCV: Computer Vision Projects with Python. You can add know-how and of course you can around the world by way of a book. Absolutely right, because from book you can realize everything! From your country until eventually foreign or abroad you will find yourself known. About simple factor until wonderful thing you can know that. In this era, we are able to open a book or perhaps searching by internet gadget. It is called e-book. You can use it when you feel bored stiff to go to the library. Let's examine.

Roger Lindsey:

Reading a book can be one of a lot of activity that everyone in the world adores. Do you like reading book consequently. There are a lot of reasons why people enjoyed. First reading a book will give you a lot of new information. When you read a publication you will get new information since book is one of several ways to share the information or their idea. Second, reading through a book will make an individual more imaginative. When you reading a book especially fictional book the author will bring one to imagine the story how the personas do it anything. Third, you are able to share your knowledge to others. When you read this OpenCV: Computer Vision Projects with Python, it is possible to tells your family, friends as well as soon about yours book. Your knowledge can inspire the others, make them reading a e-book.

Robert Leggett:

Exactly why? Because this OpenCV: Computer Vision Projects with Python is an unordinary book that the inside of the publication waiting for you to snap this but latter it will shock you with the secret that inside. Reading this book close to it was fantastic author who else write the book in such wonderful way makes the content on the inside easier to understand, entertaining method but still convey the meaning thoroughly. So , it is good for you for not hesitating having this nowadays or you going to regret it. This excellent book will give you a lot of benefits than the other book include such as help improving your skill and your critical thinking technique. So , still want to hold up having that book? If I had been you I will go to the reserve store hurriedly.

Elizabeth Walborn:

Do you like reading a reserve? Confuse to looking for your best book? Or your book ended up being rare? Why so many problem for the book? But any kind of people feel that they enjoy for reading. Some people likes looking at, not only science book but novel and OpenCV: Computer Vision Projects with Python or perhaps others sources were given information for you. After you know how the great a book, you feel wish to read more and more. Science publication was created for teacher as well as students especially. Those ebooks are helping them to include their knowledge. In various other case, beside science book, any other

book likes OpenCV: Computer Vision Projects with Python to make your spare time considerably more colorful. Many types of book like this.

Read OpenCV: Computer Vision Projects with Python by Joseph Howse, Prateek Joshi, Michael Beyeler for online ebook

OpenCV: Computer Vision Projects with Python by Joseph Howse, Prateek Joshi, Michael Beyeler Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read OpenCV: Computer Vision Projects with Python by Joseph Howse, Prateek Joshi, Michael Beyeler books to read online.

Online OpenCV: Computer Vision Projects with Python by Joseph Howse, Prateek Joshi, Michael Beyeler ebook PDF download

OpenCV: Computer Vision Projects with Python by Joseph Howse, Prateek Joshi, Michael Beyeler Doc

OpenCV: Computer Vision Projects with Python by Joseph Howse, Prateek Joshi, Michael Beyeler Mobipocket

OpenCV: Computer Vision Projects with Python by Joseph Howse, Prateek Joshi, Michael Beyeler EPub