



Learning Image Processing with OpenCV

By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vázquez Enano

Download now

Read Online ➔

Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vázquez Enano

Exploit the amazing features of OpenCV to create powerful image processing applications through easy-to-follow examples

About This Book

- Learn how to build full-fledged image processing applications using free tools and libraries
- Take advantage of cutting-edge image processing functionalities included in OpenCV v3
- Understand and optimize various features of OpenCV with the help of easy-to-grasp examples

Who This Book Is For

If you are a competent C++ programmer and want to learn the tricks of image processing with OpenCV, then this book is for you. A basic understanding of image processing is required.

What You Will Learn

- Create OpenCV programs with rich user interfaces
- Grasp basic concepts and tasks in image processing such as image types, pixel access techniques, and arithmetic operations with images and histograms
- Explore useful image processing techniques such as filtering, smoothing, sharpening, denoising, morphology, and geometrical transformations
- Get to know handy algorithms such as inpainting and LUTs
- Leverage the color manipulation features of OpenCV to optimize image processing
- Discover how to process a video and the main techniques involved such as stabilization, stitching, and even superresolution
- Understand the new computational photography module that covers high-

dynamic range imaging, seamless cloning, decolorization, and non-photorealistic rendering

In Detail

OpenCV, arguably the most widely used computer vision library, includes hundreds of ready-to-use imaging and vision functions and is used in both academia and enterprises.

This book provides an example-based tour of OpenCV's main image processing algorithms. Starting with an exploration of library installation, wherein the library structure and basics of image and video reading/writing are covered, you will dive into image filtering and the color manipulation features of OpenCV with LUTs. You'll then be introduced to techniques such as inpainting and denoising to enhance images as well as the process of HDR imaging. Finally, you'll master GPU-based accelerations. By the end of this book, you will be able to create smart and powerful image processing applications with ease! All the topics are described with short, easy-to-follow examples.

 [Download Learning Image Processing with OpenCV ...pdf](#)

 [Read Online Learning Image Processing with OpenCV ...pdf](#)

Learning Image Processing with OpenCV

By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano

Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano

Exploit the amazing features of OpenCV to create powerful image processing applications through easy-to-follow examples

About This Book

- Learn how to build full-fledged image processing applications using free tools and libraries
- Take advantage of cutting-edge image processing functionalities included in OpenCV v3
- Understand and optimize various features of OpenCV with the help of easy-to-grasp examples

Who This Book Is For

If you are a competent C++ programmer and want to learn the tricks of image processing with OpenCV, then this book is for you. A basic understanding of image processing is required.

What You Will Learn

- Create OpenCV programs with rich user interfaces
- Grasp basic concepts and tasks in image processing such as image types, pixel access techniques, and arithmetic operations with images and histograms
- Explore useful image processing techniques such as filtering, smoothing, sharpening, denoising, morphology, and geometrical transformations
- Get to know handy algorithms such as inpainting and LUTs
- Leverage the color manipulation features of OpenCV to optimize image processing
- Discover how to process a video and the main techniques involved such as stabilization, stitching, and even superresolution
- Understand the new computational photography module that covers high-dynamic range imaging, seamless cloning, decolorization, and non-photorealistic rendering

In Detail

OpenCV, arguably the most widely used computer vision library, includes hundreds of ready-to-use imaging and vision functions and is used in both academia and enterprises.

This book provides an example-based tour of OpenCV's main image processing algorithms. Starting with an exploration of library installation, wherein the library structure and basics of image and video reading/writing are covered, you will dive into image filtering and the color manipulation features of OpenCV with LUTs. You'll then be introduced to techniques such as inpainting and denoising to enhance images as well as the process of HDR imaging. Finally, you'll master GPU-based accelerations. By the end of this book, you will be able to create smart and powerful image processing applications with ease! All the

topics are described with short, easy-to-follow examples.

Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano Bibliography

- Rank: #1023141 in eBooks
- Published on: 2015-03-26
- Released on: 2015-03-26
- Format: Kindle eBook

 [Download Learning Image Processing with OpenCV ...pdf](#)

 [Read Online Learning Image Processing with OpenCV ...pdf](#)

Download and Read Free Online Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano

Editorial Review

About the Author

Gloria Bueno Garcia

Gloria Bueno Garcia holds a PhD in machine vision from Coventry University, UK. She has experience working as the principal researcher in several research centers, such as UMR 7005 research unit CNRS/ Louis Pasteur Univ. Strasbourg (France), Gilbert Gilkes & Gordon Technology (UK), and CEIT San Sebastian (Spain). She is the author of two patents, one registered type of software, and more than 100 refereed papers. Her interests are in 2D/3D multimodality image processing and artificial intelligence. She leads the VISILAB research group at the University of Castilla-La Mancha. She has coauthored a book on OpenCV programming for mobile devices: OpenCV essentials, Packt Publishing.

Oscar Deniz Suarez

Oscar Deniz Suarez's research interests are mainly focused on computer vision and pattern recognition. He is the author of more than 50 refereed papers in journals and conferences. He received the runner-up award for the best PhD work on computer vision and pattern recognition by AERFAI and the Image File and Reformatting Software Challenge Award by Innocentive Inc. He has been a national finalist for the 2009 Cor Baayen award. His work is used by cutting-edge companies, such as Existor, Gliif, Tapmedia, E-Twenty, and others, and has also been added to OpenCV. Currently, he works as an associate professor at the University of Castilla-La Mancha and contributes to VISILAB. He is a senior member of IEEE and is affiliated with AAAI, SIANI, CEA-IFAC, AEPIA, and AERFAI-IAPR. He serves as an academic editor of the PLoS ONE journal. He has been a visiting researcher at Carnegie Mellon University, Imperial College London, and Leica Biosystems. He has coauthored two books on OpenCV previously.

Jose Luis Espinosa Aranda

Jose Luis Espinosa Aranda holds a PhD in computer science from the University of Castilla-La Mancha. He has been a finalist for Certamen Universitario Arquimedes de Introduccion a la Investigacion cientifica in 2009 for his final degree project in Spain. His research interests involve computer vision, heuristic algorithms, and operational research. He is currently working at the VISILAB group as an assistant researcher and developer in computer vision topics.

Jesus Salido Tercero

Jesus Salido Tercero gained his electrical engineering degree and PhD (1996) from Universidad Politecnica de Madrid (Spain). He then spent 2 years (1997 and 1998) as a visiting scholar at the Robotics Institute (Carnegie Mellon University, Pittsburgh, USA), working on cooperative multirobot systems. Since his return to the Spanish University of Castilla-La Mancha, he spends his time teaching courses on robotics and industrial informatics, along with research on vision and intelligent systems. Over the last 3 years, his efforts have been directed to develop vision applications on mobile devices. He has coauthored a book on OpenCV programming for mobile devices.

Ismael Serrano Gracia

Ismael Serrano Gracia received his degree in computer science in 2012 from the University of Castilla-La Mancha. He got the highest marks for his final degree project on person detection. This application uses depth cameras with OpenCV libraries. Currently, he is a PhD candidate at the same university, holding a research grant from the Spanish Ministry of Science and Research. He is also working at the VISILAB group as an assistant researcher and developer on different computer vision topics.

Users Review

From reader reviews:

Ivan Caputo:

Information is provisions for individuals to get better life, information presently can get by anyone from everywhere. The information can be a information or any news even an issue. What people must be consider when those information which is within the former life are challenging be find than now could be taking seriously which one would work to believe or which one the actual resource are convinced. If you find the unstable resource then you buy it as your main information you will see huge disadvantage for you. All of those possibilities will not happen in you if you take Learning Image Processing with OpenCV as your daily resource information.

Thomas Hayden:

Typically the book Learning Image Processing with OpenCV will bring you to the new experience of reading a new book. The author style to elucidate the idea is very unique. If you try to find new book to learn, this book very ideal to you. The book Learning Image Processing with OpenCV is much recommended to you to see. You can also get the e-book from the official web site, so you can quicker to read the book.

Tiffany Reyes:

The e-book with title Learning Image Processing with OpenCV contains a lot of information that you can learn it. You can get a lot of profit after read this book. This book exist new information the information that exist in this guide represented the condition of the world at this point. That is important to yo7u to know how the improvement of the world. This book will bring you in new era of the syndication. You can read the e-

book on your own smart phone, so you can read it anywhere you want.

Henry Buford:

Don't be worry if you are afraid that this book will certainly filled the space in your house, you could have it in e-book approach, more simple and reachable. This specific Learning Image Processing with OpenCV can give you a lot of friends because by you checking out this one book you have point that they don't and make a person more like an interesting person. This specific book can be one of one step for you to get success. This e-book offer you information that probably your friend doesn't learn, by knowing more than some other make you to be great individuals. So , why hesitate? Let's have Learning Image Processing with OpenCV.

Download and Read Online Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano #9GZC45MYET0

Read Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano for online ebook

Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano 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 Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano books to read online.

Online Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano ebook PDF download

Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano Doc

Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano Mobipocket

Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano EPub

9GZC45MYET0: Learning Image Processing with OpenCV By Gloria Bueno García, Oscar Deniz Suarez, José Luis Espinosa Aranda, Jesus Salido Tercero, Ismael Serrano Gracia, Noelia Vállez Enano