Mastering OpenCV with Practical Computer Vision Projects

Von Daniel Llis Baggio, Shervin Emami, David Milln Escriv, Khvedchenia Ievgen, Naureen Mahmood, Jason Saragih, Roy Shilkrot
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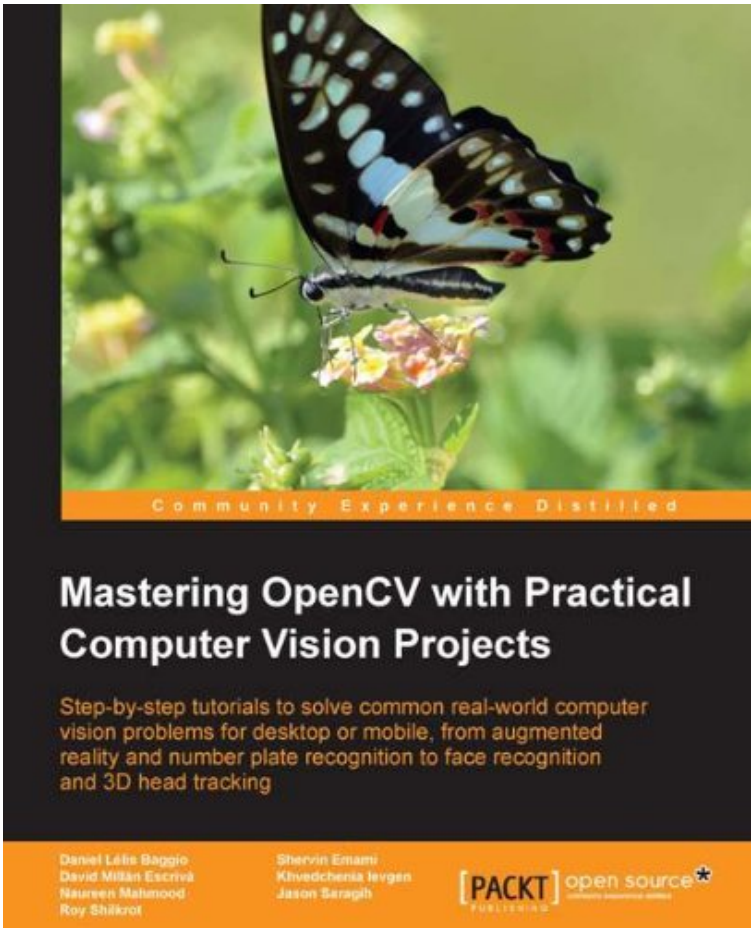

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Von Daniel Llis Baggio, Shervin Emami, David Milln Escriv, Khvedchenia Ievgen, Naureen Mahmood, Jason Saragih, Roy Shilkrot : Mastering OpenCV with Practical Computer Vision Projects before purchasing it in order to gage whether or not it would be worth my time, and all praised Mastering OpenCV with Practical Computer Vision Projects:

KundenrezensionenHilfreichste Kundenrezensionen1 von 1 Kunden fanden die folgende Rezension hilfreich. Hervorragend!Von MarcoWirklich gute Beispiele, hervorragendes Praxisbuch! Genau was man braucht um zu Arbeiten - keine berflssigen Abschriften von Hilfedateien oder Funktionsbeschreibungen sondern praxisnahe Beispiele an denen man sich orientieren kann

KurzbeschreibungIn DetailOpenCV is a computer vision library that is extensively used in companies, research groups and governmental bodies for real-time capture, video file import, image manipulation, object detection and much more. Its comprehensive set of computer vision and machine learning algorithms makes it the obvious choice for professionals to develop visual applications.With this book in hand, you would not need to plow through several pages of theory as this book will take you through the creation of many exciting projects that showcase the huge range of possibilities that open up when OpenCV is exploited to its full potential.ApproachUsing a project-based approach you will learn fun and challenging aspects of OpenCV computer vision application development. With each project you will be able to show off a creation that utilizes OpenCVs features to its maximum potential.Who this book is forThis book is for researchers, programmers, and software developers who know the basics of OpenCV and are interested in building computer vision applications themselves.KurzbeschreibungIn DetailOpenCV is a computer vision library that is extensively used in companies, research groups and governmental bodies for real-time capture, video file import, image manipulation, object detection and much more. 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With each project you will be able to show off a creation that utilizes OpenCVs features to its maximum potential.Who this book is forThis book is for researchers, programmers, and software developers who know the basics of OpenCV and are interested in building computer vision applications themselves.ber den Autor und weitere MitwirkendeDaniel Llis Baggio Daniel Llis Baggio started his work in computer vision through medical image processing at InCor (Instituto do Corao Heart Institute) in So Paulo, where he worked with intra-vascular ultrasound image segmentation. Since then, he has focused on GPGPU and ported the segmentation algorithm to work with NVIDIA's CUDA. He has also dived into six degrees of freedom head tracking with a natural user interface group through a project called ehci (http://code.google.com/p/ehci/). He now works for the Brazilian Air Force.Shervin Emami Shervin Emami (born in Iran) taught himself electronics and hobby robotics during his early teens in Australia. While building his first robot at the age of 15, he learned how RAM and CPUs work. He was so amazed by the concept that he soon designed and built a whole Z80 motherboard to control his robot, and wrote all the software purely in binary machine code using two push buttons for 0s and 1s. After learning that computers can be programmed in much easier ways such as assembly language and even high-level compilers, Shervin became hooked to computer programming and has been programming desktops, robots, and smartphones nearly every day since then. During his late teens he created Draw3D (http://draw3d.shervinemami.info/), a 3D modeler with 30,000 lines of optimized C and assembly code that rendered 3D graphics faster than all the commercial alternatives of the time; but he lost interest in graphics programming when 3D hardware acceleration became available. In University, Shervin took a subject on computer vision and became highly interested in it; so for his first thesis in 2003 he created a real-time face detection program based on Eigenfaces, using OpenCV (beta 3) for camera input. For his master's thesis in 2005 he created a visual navigation system for several mobile robots using OpenCV (v0.96). From 2008, he worked as a freelance Computer Vision Developer in Abu Dhabi and Philippines, using OpenCV for a large number of short-term commercial projects that included: Detecting faces using Haar or Eigenfaces Recognizing faces using Neural Networks, EHMM, or Eigenfaces Detecting the 3D position and orientation of a face from a single photo using AAM and POSIT Rotating a face in 3D using only a single photo Face preprocessing and artificial lighting using any 3D direction from a single photo Gender recognition Facial expression recognition Skin detection Iris detection Pupil detection Eye-gaze tracking Visual-saliency tracking Histogram matching Body-size detection Shirt and bikini detection Money recognition Video stabilization Face recognition on iPhone Food recognition on iPhone Marker-based augmented reality on iPhone (the second-fastest iPhone augmented reality app at the time). OpenCV was putting food on the table for Shervin's family, so he began giving back to OpenCV through regular advice on the forums and by posting free OpenCV tutorials on his website (http://www.shervinemami.info/openCV.html). In 2011, he contacted the owners of other free OpenCV websites to write this book. He also began working on computer vision optimization for mobile devices at NVIDIA, working closely with the official OpenCV developers to produce an optimized version of OpenCV for Android. In 2012, he also joined the Khronos OpenVL committee for standardizing the hardware acceleration of computer vision for mobile devices, on which OpenCV will be based in the future.David Milln Escriv David Milln Escriv was eight years old when he wrote his first program on an 8086 PC with Basic language, which enabled the 2D plotting of basic equations. In 2005, he finished his studies in IT through the Universitat Politcnica de Valencia with honors in human-computer interaction supported by computer vision with OpenCV (v0.96). He had a final project based on this subject and published it on HCI Spanish congress. He participated in Blender, an open source, 3D-software project, and worked in his first commercial movie Plumiferos - Aventuras voladoras as a Computer Graphics Software Developer. David now has more than 10 years of experience in IT, with experience in computer vision, computer graphics, and pattern recognition, working on different projects and startups, applying his knowledge of computer vision, optical character

recognition, and augmented reality. He is the author of the "DamilesBlog" (http://blog.damiles.com), where he publishes research articles and tutorials about OpenCV, computer vision in general, and Optical Character Recognition algorithms. David has reviewed the book gnuPlot Cookbook by Lee Phillips and published by Packt Publishing.Khvedchenia Ievgen Khvedchenia Ievgen is a computer vision expert from Ukraine. He started his career with research and development of a camera-based driver assistance system for Harman International. He then began working as a Computer Vision Consultant for ESG. Nowadays, he is a self-employed developer focusing on the development of augmented reality applications. Ievgen is the author of the Computer Vision Talks blog (http://computer-vision-talks.com), where he publishes research articles and tutorials pertaining to computer vision and augmented reality.Naureen Mahmood Naureen Mahmood is a recent graduate from the Visualization department at Texas AM University. She has experience working in various programming environments, animation software, and microcontroller electronics. Her work involves creating interactive applications using sensor-based electronics and software engineering. She has also worked on creating physics-based simulations and their use in special effects for animation. Here is her blog - http://howdweknows.blogspot.com/Jason Saragih Jason Saragih received his B.Eng degree in mechatronics (with honors) and Ph.D. in computer science from the Australian National University, Canberra, Australia, in 2004 and 2008, respectively. From 2008 to 2010 he was a Postdoctoral fellow at the Robotics Institute of Carnegie Mellon University, Pittsburgh, PA. From 2010 to 2012 he worked at the Commonwealth Scientific and Industrial Research Organization (CSIRO) as a Research Scientist. He is currently a Senior Research Scientist at Visual Features, an Australian tech startup company. Dr. Saragih has made a number of contributions to the field of computer vision, specifically on the topic of deformable model registration and modeling. He is the author of two non-profit open source libraries that are widely used in the scientific community; DeMoLib and FaceTracker, both of which make use of generic computer vision libraries including OpenCV. Here is his blog address - http://jsaragih.org/Roy Shilkrot Roy Shilkrot is a researcher and professional in the area of computer vision and computer graphics. He obtained a B.Sc. in Computer Science from Tel-Aviv-Yaffo Academic College, and an M.Sc. from Tel-Aviv University. He is currently a PhD candidate in Media Laboratory of the Massachusetts Institute of Technology (MIT) in Cambridge. Roy has over seven years of experience as a Software Engineer in start-up companies and enterprises. Before joining the MIT Media Lab as a Research Assistant he worked as a Technology Strategist in the Innovation Laboratory of Comverse, a telecom solutions provider. He also dabbled in consultancy, and worked as an intern for Microsoft research at Redmond. Here is his blog address - http://www.morethantechnical.com/