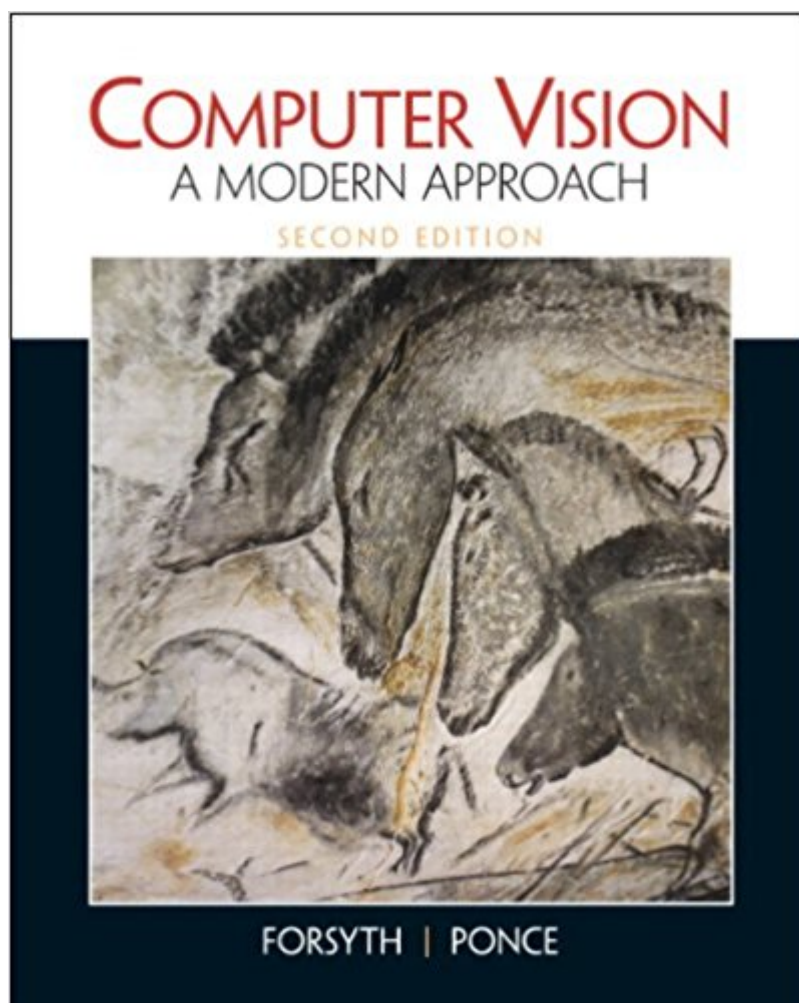The book was found

Computer Vision: A Modern Approach (2nd Edition)

Synopsis

Computer Vision: A Modern Approach, 2e, is appropriate for upper-division undergraduate- and graduate-level courses in computer vision found in departments of Computer Science, Computer Engineering and Electrical Engineering.   This textbook provides the most complete treatment of modern computer vision methods by two of the leading authorities in the field. This accessible presentation gives both a general view of the entire computer vision enterprise and also offers sufficient detail for students to be able to build useful applications. Students will learn techniques that have proven to be useful by first-hand experience and a wide range of mathematical methods

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Customer Reviews

The accessible presentation of this book gives both a general view of the entire computer vision enterprise and also offers sufficient detail to be able to build useful applications. Users learn techniques that have proven to be useful by first-hand experience and a wide range of mathematical methods. KEY TOPICS: Comprehensive and up-to-date, this book includes essential topics that either reflect practical significance or are of theoretical importance. Topics are discussed in substantial and increasing depth. Application surveys describe numerous important application areas such as image based rendering and digital libraries. Many important algorithms broken down and illustrated in pseudo code. MARKET: Appropriate for use by engineers as a comprehensive reference to the computer vision enterprise. --This text refers to an out of print or unavailable edition

of this title.

Computer Vision: A Modern Approach This extraordinary book gives a uniquely modern view of computer vision. Offering a general survey of the whole computer vision enterprise along with sufficient detail for readers to be able to build useful applications, this book is invaluable in providing a strategic overview of computer vision. With extensive use of probabalistic methods— topics have been selected for their importance, both practically and theoretically—the book gives the most coherent possible synthesis of current views, emphasizing techniques that have been successful in building applications. Readers engaged in computer graphics, robotics, image processing, and imaging in general will find this text an informative reference. KEY FEATURES Application Surveys—Numerous examples, including Image Based Rendering and Digital Libraries Boxed Algorithms—Key algorithms broken out and illustrated in pseudo code Self-Contained—No need for other references Extensive, Detailed Illustrations—Examples of inputs and outputs for current methods Programming Assignments—50 programming assignments and 150 exercises --This text refers to an out of print or unavailable edition of this title.

I bought this without reading the fine print (shame on me). Apparently, the "kindle" version doesn't actually work on the Kindle. Nor does it work on any android device except the Kindle Fire. It does say it works on "PC", by which it means Windows only... This is an unacceptable delivery method. It has a relatively large number of errors. The material is presented in an unapproachable way, such that it's probably most useful as a reference for someone who just needs a reminder of available techniques. I used this for a semester course in graduate computer vision. I'm also a math major, so my problem with the book is not a lack of proper background.

had to get this for a college class and it was worthless. the authors cannot explain complex topics to save their lives. stick with your professor's lectures and skip this book.

The author has good mathematics, but not the abilities to explain something clearly to a student or a beginner. I need to buy another book.

The book has almost all the things anyone who is interested in computer vision. I love the way each topic is linked in the book. But it does not some of the topics are vague. I think some examples

would have made those topics more lucid. It is an important book to keep for anyone who wants to work on computer vision.

This book is the required textbook for a class. I ordered the 2nd edition after reading the poor reviews dating back to well before the second edition had been published. It was my hope that perhaps a major rewrite had occurred after that author absorbed the poor reviews. Sadly, that does not appear to be the case. I am just starting the class and have much of the book left to read, but the frustration felt by past reviewers is now clearly understood by me.In general, the book tends to run both hot and cold. Clearly the authors are deeply knowledgeable about the subject. And there are many good sections of the book that do reasonable job of explaining the concepts. It is the sections that dive into the math where the authors tend to undermine their own hard work and that, I believe, are source of a number of the book's poor reviews.One of the topics of the book is the classification (of images), so in keeping with this let me attempt to classify this book. This book seems to fall into the category of a book written by really smart people that loses more than it has to when read by a not-so-smart person. Said differently, this is probably a great book for those that already know the subject and the math. That is, the book can be quite readable for a few paragraphs and give the reader some intuition for the topic. However, when the book dives into the math for a few paragraphs and then emerges on the far shore, it has probably abandoned most readers. Certainly, more often than not it has abandoned me and, from the reviews, I believe that I am not the only one. I suspect the authors have majors in math, but perhaps they have been swimming in the math for so long that it has become comfortable. Whatever the reason, the authors do a poor job in setting up the math, are too dependent on concise math notation (again which would be well know to a math major but not necessarily by others) and as the math discussion progresses the authors make among the largest leaps mathematically among any textbook that I can recall. Additionally, the sections that discuss the math seem to be of varying quality. Often I would get the sense that what made it to final print were a set of notes or a rough draft that had not yet been completed let alone edited.Regarding the poor setup and excessive brevity in a passage I just read, the authors describe an equation as having three terms, then they give the equation and never state which term is which. As the math unfolds, the reader is stuck because, although he can read the transformations relating to (for example) the rho term he does not know which term is represented by rho. The author also at points use what I find to be a somewhat odd notation (e.g., for linear algebra). In general a few examples would go a long way as well. The authors attempts at homogeneous coordinates and scale rotate and translate was awful and awfully short. A book that I

have on motion in robotics spends perhaps 5 times as many pages to discuss a similar topic, with more examples and less dense notation, with the upshot being that the reader of the robotics book walks away having learned the concept and the Computer Vision reader walks away confused and having learned little (again, a math major might have been able to track better with the CV book and gotten a little more).Were the authors to read this critique, they might counter that they were trying limit the math and instead to provide narratives that provide for an intuitive understanding of the subject. This would be a fair point and a worthy goal. When writing a book, the author must decide who his intended audience is; e.g., an undergraduate engineering student, a graduate student, academic colleagues, etc. However, if this was their intent then the approach the authors took was not unlike trying to meet a page count by removing every third word from the draft text.In short, of what I have read so far, this book can only be followed without great struggle by those already familiar with the subject and the math. It has lots of potential, so I hope that the authors take the criticism in the constructive spirit in which it is offered with the result being a still better third edition.

I am a very senior computer vision professor at a top-10 university. I never post on , but this book is simply awful. How can this fellow be editor in chief of PAMI? This is not how computer vision should be taught. It's more a book for computer graphics people, and not a good one.

This is, from what I can tell, just about the most complete up-to-date text in the field of computer vision as of late 2006.But it's a mess.I'm a PhD student, and have worked my way through more than my fair share of high-level computer science textbooks. This one makes me really appreciate many of them. It reads like a first draft -- overly wordy at times, skipping over important issues, poorly organized... Some concepts that ought to be really simple are made very painful due to what seems to be laziness on the part of the editor. It's like the only people that critiqued this book prior to publication already knew all there is to know about computer vision.A particularly nasty aspect of this book is that the authors have a horrible habit of including some term in some complex mathematical formula, with no reference whatsoever to that term in the surrounding text! In an explanation of how to use Expectation Maximization in line-fitting, they include a standard-deviation term, with no mention of how you're supposed to choose a value for it other than "...for sigma as before". The only "before" in which the SD (sigma) is mentioned in a similar context that I can find is IN THE PREVIOUS CHAPTER!!!Anyway, if you want to try to teach yourself vision, don't bother. If you need the book for a class, I'm sorry it's so expensive. Either way, don't expect much.

I am a current PhD student working on computer vision. I feel it is a shame that, one of the most famous books for one of the most popular areas in computer science is a total mess. The authors do not know what it means for a textbook. Do not buy it! "Multiple View Geometry" is a nice book. For application-oriented vision problems, I suggest readers look at recent papers published at CVPR, ICCV, PAMI, etc.

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