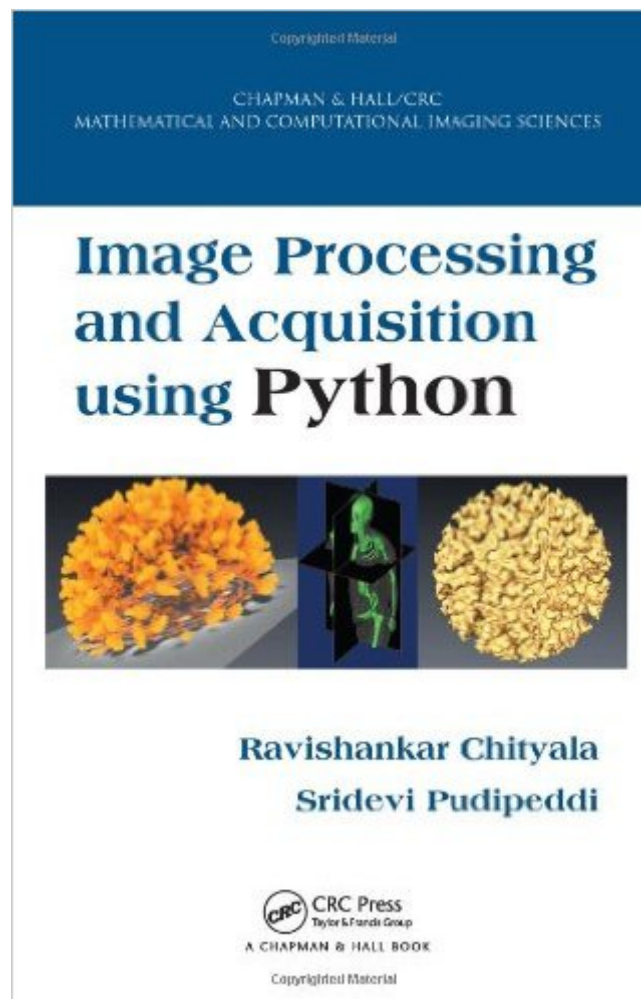The book was found

Image Processing And Acquisition Using Python (Chapman & Hall/CRC Mathematical And Computational Imaging Sciences Series)

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MATHEMATICAL AND COMPUTATIONAL IMAGING SCIENCES

Image Processing and Acquisition using Python

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CRC Press
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Synopsis

Image Processing and Acquisition using Python provides readers with a sound foundation in both image acquisition and image processingâ •one of the first books to integrate these topics together. By improving readersâ ™ knowledge of image acquisition techniques and corresponding image processing, the book will help them perform experiments more effectively and cost efficiently as well as analyze and measure more accurately. Long recognized as one of the easiest languages for non-programmers to learn, Python is used in a variety of practical examples. A refresher for more experienced readers, the first part of the book presents an introduction to Python, Python modules, reading and writing images using Python, and an introduction to images. The second part discusses the basics of image processing, including pre/post processing using filters, segmentation, morphological operations, and measurements. The last part describes image acquisition using various modalities, such as x-ray, CT, MRI, light microscopy, and electron microscopy. These modalities encompass most of the common image acquisition methods currently used by researchers in academia and industry.

Book Information

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Customer Reviews

This is an informative and well written text. I teach college chemistry and mathematics and I have no computer programming experience. I found the text to be very readable with excellent descriptions and images. The mathematics was clear and understandable. Each chapter has an introduction that

brings the reader back to what was previously learned and ties the concepts together. The text begins with a brief introduction to Python and describes the most popular Python modules that are relevant to image processing. It then explains concepts that are important to image enhancement in both the spatial domain and the frequency domain. This is followed by chapters on morphological operations and image measurement. Finally, the text explores image acquisition through the use of X-rays, computed tomography, magnetic resonance imaging, and both light and electron microscopes. In addition to being a text that is appropriate for a course on image processing, I would advise that any scientist or medical professional who deals with imaging should read this. It will provide you with a better understanding of imaging that will greatly enhance your appreciation of the process and will enable you to achieve results in experimentation more effectively.

The authors did an amazing job with this text. It is aimed at those with limited programming skills and image processing knowledge. It is written very clearly, with many code examples that are perfect for bookmarking and reference. Worth every penny. This book has helped improve my coding and image processing skills like I would never have imagined.

I enjoyed reading this book. Well worded, great examples, dives right into the good stuff and gives numerous applications in medical science.

I found this book to be a very helpful introduction to image processing algorigthms for my research. It is well written and for me (a spectroscopist with an interest in expanding my expertise to image processing and python) the level of depth is just about perfect.

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