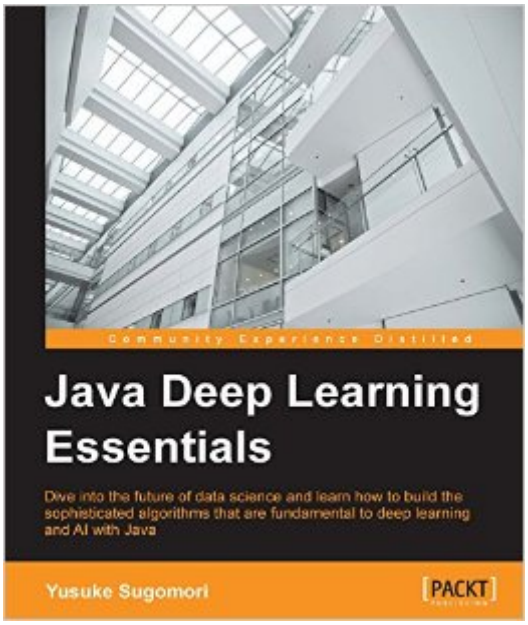
Java Deep Learning Essentials



Synopsis

Dive into the future of data science and learn how to build the sophisticated algorithms that are fundamental to deep learning and AI with JavaAbout This BookGo beyond the theory and put Deep Learning into practice with JavaFind out how to build a range of Deep Learning algorithms using a range of leading frameworks including DL4J, Theano and CaffeWhether you’re a data scientist or Java developer, dive in and find out how to tackle Deep LearningWho This Book Is ForThis book is intended for data scientists and Java developers who want to dive into the exciting world of deep learning. It would also be good for machine learning users who intend to leverage deep learning in their projects, working within a big data environment.What You Will LearnGet a practical deep dive into machine learning and deep learning algorithmsImplement machine learning algorithms related to deep learningExplore neural networks using some of the most popular Deep Learning frameworksDive into Deep Belief Nets and Stacked Denoising Autoencoders algorithmsDiscover more deep learning algorithms with Dropout and Convolutional Neural NetworksGain an insight into the deep learning library DL4J and its practical usesGet to know device strategies to use deep learning algorithms and libraries in the real worldExplore deep learning further with Theano and CaffeIn DetailAI and Deep Learning are transforming the way we understand software, making computers more intelligent than we could even imagine just a decade ago. Deep Learning algorithms are being used across a broad range of industries â “ as the fundamental driver of AI, being able to tackle Deep Learning is going to a vital and valuable skill not only within the tech world but also for the wider global economy that depends upon knowledge and insight for growth and success. It’s something that’s moving beyond the realm of data science â “ if you’re a Java developer, this book gives you a great opportunity to expand your skillset.Starting with an introduction to basic machine learning algorithms, to give you a solid foundation, Deep Learning with Java takes you further into this vital world of stunning predictive insights and remarkable machine intelligence. Once you’ve got to grips with the fundamental mathematical principles, you’ll start exploring neural networks and identify how to tackle challenges in large networks using advanced algorithms. You will learn how to use the DL4J library and apply Deep Learning to a range of real-world use cases. Featuring further guidance and insights to help you solve challenging problems in image processing, speech recognition, language modeling, this book will make you rethink what you can do with Java, showing you how to use it for truly cutting-edge predictive insights. As a bonus, you’ll also be able to get to grips with Theano and Caffe, two of the most important tools in Deep Learning today.By the end of the book, you’ll be ready to tackle Deep Learning with Java. Wherever you’ve come from â “ whether you’re a data scientist or Java

developer â “ you will become a part of the Deep Learning revolution!Style and approachThis is a step-by-step, practical tutorial that discusses key concepts. This book offers a hands-on approach to key algorithms to help you develop a greater understanding of deep learning. It is packed with implementations from scratch, with detailed explanation that make the concepts easy to understand and follow.

Book Information

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Customer Reviews

I'm quite pleased with this book, actually. I was a little reluctant initially, fearing that this would be nothing but a simple surface-level overview of how to put together a bunch of pre-existing libraries (ick). Instead, it actually goes into the mathematical derivations and underlying principles of the algorithms (!) and instructs the user on how to build systems from the ground up. I'll likely be using this a lot in the near and distant future as a reference when I have to implement these systems in other languages. The reason I'm not giving it four stars is that I felt it was a little on the thin-side at times. It could easily go into more depth on building computational graphs and doing backprop against them instead of the simple layer/weight setup. I'll go through it again in the near future and may update my review.

I thought this was a very well-written book on Deep Learning (DL). Java is (in my opinion) not the best language for teaching algorithms, but the example code is very readable. Like many DL books, the book focuses a lot on basic concepts and the math derivations behind them, so in that sense it is relatively undifferentiated from these books - however, it is is the only one that does so in Java. This is the only book I have read that has extensive coverage of pre-training (Deep Belief Networks, Restricted Boltzmann Machines, Denoising Autoencoders (DA), and Stacked DAs). Other "standard" networks such as Multilayer Perceptrons, Convolutional Neural Networks and Recurrent Neural Networks are also covered, about as well as other books I have read. The author provides good intuition around ideas such as dropout and learning rate adjustments. I bought the book because I wanted a quick intro to the DeepLearning4j framework - unfortunately the book has only one chapter dedicated to that with a fairly basic example. However, one can use it as a template and refer to the (very informative) DL4j website for more information. Overall, I think it is a good resource for Java programmers who want to learn Deep Learning.

The text is pretty difficult to follow, not because of the technical nature of the material, but because the author uses some pretty esoteric meanings for words. The text reads like someone simply transcribed audio lectures. I'll probably be returning this book.

If you are a data scientist just like me .you will love this particularly DL4J examples.Haven't completed the full book yet, but happy what I have read so far. It is technical, but let's face it deep learning is technical. Had some 'ah ha' moments while reading..

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