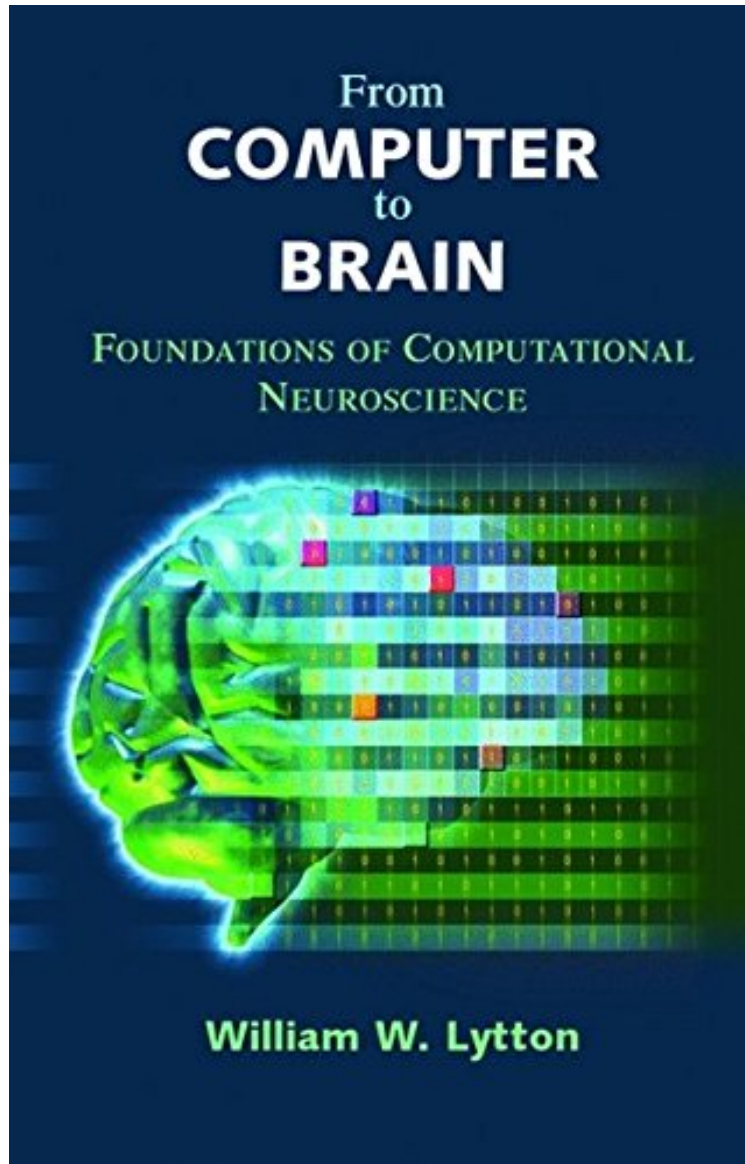


From Computer to Brain: Foundations of Computational Neuroscience

William W. Lytton

ePub | *DOC | audiobook | ebooks | Download PDF



DOWNLOAD



READ ONLINE

#1736748 in Books William W Lytton 2002-10-01 2013-10-04 Original language: English PDF # 1 9.25 x .88 x 6.10l, 1.30 #File Name: 0387955267364 pages From Computer to Brain Foundations of Computational Neuroscience | File size: 42.Mb

William W. Lytton : From Computer to Brain: Foundations of Computational Neuroscience before purchasing it in order to gauge whether or not it would be worth my time, and all praised From Computer to Brain: Foundations of Computational Neuroscience:

3 of 3 people found the following review helpful. Very good general audience introduction to computational neuroscience
By ConcernedDadI really enjoyed reading this book - it reads easily, and it is often actually fun to read. That being said, this book was not entirely what I expected. I learned a lot about how computers operate, artificial neural networks, and how the abstract concepts of neural networks approximate (or fail to approximate) the biological reality. Other than simple linear algebra-based artificial neural network simulations, this book will not teach you how to do computational modeling of neurons or networks, but I don't think that a how-to-model manual was the author's intent. This book is a very accessible introduction to concepts in computational neuroscience that are difficult for novices to learn from other texts because computational neuroscience is typically formulated in the language of mathematics. In order to actually do some modeling of your own, you are still going to need to develop the required skills in math and programming. Neuroscience is overwhelmingly full of facts, which you can very easily appreciate if you read a general neuroscience text like *From Neuron to Brain*. The great thing about this book is that it is primarily principle-based - it doesn't get lost in a myriad of facts. Each chapter seems to contain one solid theoretical principle or concept that can be used to understand the brain.
1 of 1 people found the following review helpful. Great!
By Douglas JorgeVery good book for beginners. Simple and direct to the point. Gives good explanation for people coming from the biologics or computer sciences. Has an reference area on the end of the book for topics like calculus and other import concepts.I really recommend it.
1 of 1 people found the following review helpful. but still a good introduction. Might want to supplement it with *The ...*
By Christina RobinsonA bit dated, but still a good introduction. Might want to supplement it with *The Troyner Notes*.

Biology undergraduates, medical students and life-science graduate students often have limited mathematical skills. Similarly, physics, math and engineering students have little patience for the detailed facts that make up much of biological knowledge. Teaching computational neuroscience as an integrated discipline requires that both groups be brought forward onto common ground. This book does this by making ancillary material available in an appendix and providing basic explanations without becoming bogged down in unnecessary details. The book will be suitable for undergraduates and beginning graduate students taking a computational neuroscience course and also to anyone with an interest in the uses of the computer in modeling the nervous system.

From the Foreword: "In *From Computer to Brain: Foundations of Computational Neuroscience*, William W. Lytton provides a gentle but rigorous introduction to the art of modeling neurons and neural systems. It is an accessible entry to the methods and approaches used to model the brain at many different levels, ranging from synapses and dendrites to neurons and neural circuits. This book gives a balanced view of the wide range of modeling techniques that are available in a way that is accessible to a wide audience. This is a book that will bring a smile to your face as well as inspire your imagination." -- Terrence J. Sejnowski
Howard Hughes Medical Institute, Salk Institute, University of California at San Diego