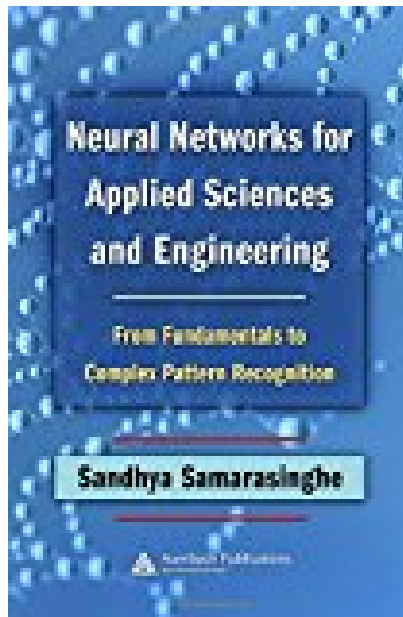


Neural Networks for Applied Sciences and Engineering From Fundamentals to Complex Pattern Recognition



BOOK DETAILS

- Author : Sandhya Samarasinghe
- Pages : 570 Pages
- Publisher : Auerbach Publications
- Language : English
- ISBN : 084933375X

[↓ DOWNLOAD](#)

BOOK SYNOPSIS

In response to the exponentially increasing need to analyze vast amounts of data, *Neural Networks for Applied Sciences and Engineering: From Fundamentals to Complex Pattern Recognition* provides scientists with a simple but systematic introduction to neural networks. Beginning with an introductory discussion on the role of neural networks in scientific data analysis, this book provides a solid foundation of basic neural network concepts. It contains an overview of neural network architectures for practical data analysis followed by extensive step-by-step coverage on linear networks, as well as, multi-layer perceptron for nonlinear prediction and classification explaining all stages of processing and model development illustrated through practical examples and case studies. Later chapters present an extensive coverage on Self Organizing Maps for nonlinear data clustering, recurrent networks for linear nonlinear time series forecasting, and other network types suitable for scientific data analysis. With an easy to understand format using extensive graphical illustrations and multidisciplinary scientific context, this book fills the gap in the market for neural networks for multi-dimensional scientific data, and relates neural networks to statistics. Features § Explains neural networks in a multi-disciplinary context § Uses extensive graphical illustrations to explain complex mathematical concepts for quick and easy understanding § Examines in-depth neural networks for linear and nonlinear prediction, classification, clustering and forecasting § Illustrates all stages of model development and interpretation of results, including data preprocessing, data dimensionality reduction, input selection, model development and validation, model uncertainty assessment, sensitivity analyses on inputs, errors and model parameters

Sandhya Samarasinghe obtained her MSc in Mechanical Engineering from Lumumba University in Russia and an MS and PhD in Engineering from Virginia Tech, USA. Her neural networks research focuses on theoretical understanding and advancements as well as practical implementations.

NEURAL NETWORKS FOR APPLIED SCIENCES AND ENGINEERING FROM FUNDAMENTALS TO COMPLEX PATTERN RECOGNITION - Are you looking for Ebook Neural Networks For Applied Sciences And Engineering From Fundamentals To Complex Pattern Recognition? You will be glad to know that right now Neural Networks For Applied Sciences And Engineering From Fundamentals To Complex Pattern Recognition is available on our online library. With our online resources, you can find Applied Numerical Methods With Matlab Solution Manual 3rd Edition or just about any type of ebooks, for any type of product. Best of all, they are entirely free to find, use and download, so there is no cost or stress at all. Neural Networks For Applied Sciences And Engineering From Fundamentals To Complex Pattern Recognition may not make exciting reading, but Applied Numerical Methods With Matlab Solution Manual 3rd Edition is packed with valuable instructions, information and warnings. We also have many ebooks and user guide is also related with Neural Networks For Applied Sciences And Engineering From Fundamentals To Complex Pattern Recognition and many other ebooks.

We have made it easy for you to find a PDF Ebooks without any digging. And by having access to our ebooks online or by storing it on your computer, you have convenient answers with Neural Networks For Applied Sciences And Engineering From Fundamentals To Complex Pattern Recognition. To get started finding Neural Networks For Applied Sciences And Engineering From Fundamentals To Complex Pattern Recognition, you are right to find our website which has a comprehensive collection of manuals listed.