



overview of the domain of deep learning neural networks. You will gain an understanding of the conception of neural networks and how biological and artificial neural networks differ from each other. You'll learn about artificial neural networks and understand how neural networks function in general. Finally, you'll learn how to teach your networks. To understand this book, you'll need to understand some preliminary mathematical concepts. This book contains illustrations and step-by-step explanations with bullet points and exercises for easy and enjoyable learning Benefits of reading this book that you're not going to find anywhere else: INTRODUCTION TO NEURAL NETWORKS STRUCTURES OF NEURAL NETWORKS BUILDING A NEURAL NETWORK THE CONSTRUCTION OF ARTIFICIAL NEURONS THE BIOLOGICAL NEURONS MODEL HOW THEY WORK THE CAPABILITIES OF NEURAL NETWORK STRUCTURE TEACHING YOUR NETWORKS METHODS OF GATHERING INFORMATION ORGANIZING YOUR NETWORK USAGE OF MOMENTUM USING NEURAL NETWORKS USING NEURAL NETWORKS IN A PRACTICAL WAY THE CAPACITY OF A SINGLE NEURON Don't miss out on this new step by step guide to Neural Networks. All you need to do is scroll up and click on the BUY NOW button to learn all about it!

Neural Networks are a new, interdisciplinary tool for information processing. Neurocomputing being successfully introduced to structural problems which are difficult or even impossible to be analysed by standard computers (hard computing). The book is devoted to foundations and applications of NNs in the structural mechanics and design of structures.

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

Elements of Artificial Neural Networks provides a clearly organized general introduction, focusing on a broad range of algorithms, for students and others who want to use neural networks rather than simply study them. The authors, who have been developing and team teaching the material in a one-semester course over the past six years, describe most of the basic neural network models (with several detailed solved examples) and discuss the rationale and advantages of the models, as well as their limitations. The approach is practical and open-minded and requires very little mathematical or technical background. Written from a computer science and statistics point of view, the text stresses links to contiguous fields and can easily serve as a first course for students in economics and management. The opening chapter sets the stage, presenting the basic concepts in a clear and objective way and tackling important -- yet rarely addressed -- questions related to the use of neural networks in practical situations. Subsequent chapters on supervised learning (single layer and multilayer networks), unsupervised learning, and associative models are structured around classes of problems to which networks can be applied. Applications are discussed along with the algorithms. A separate chapter takes up optimization methods. The most frequently used algorithms, such as backpropagation, are introduced early on, right after perceptrons, so that these can form the basis for initiating course projects. Algorithms published as late as 1995 are also included. All of the algorithms are presented using block-structured pseudo-code, and exercises are provided throughout. Software implementing many commonly used neural network algorithms is available at the book's website. Transparency masters, including abbreviated text and figures for the entire book, are available for instructors using the text.

"This book introduces Higher Order Neural Networks (HONNs) to computer scientists and computer engineers as an open box neural networks tool when compared to traditional artificial neural networks"--Provided by publisher.

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