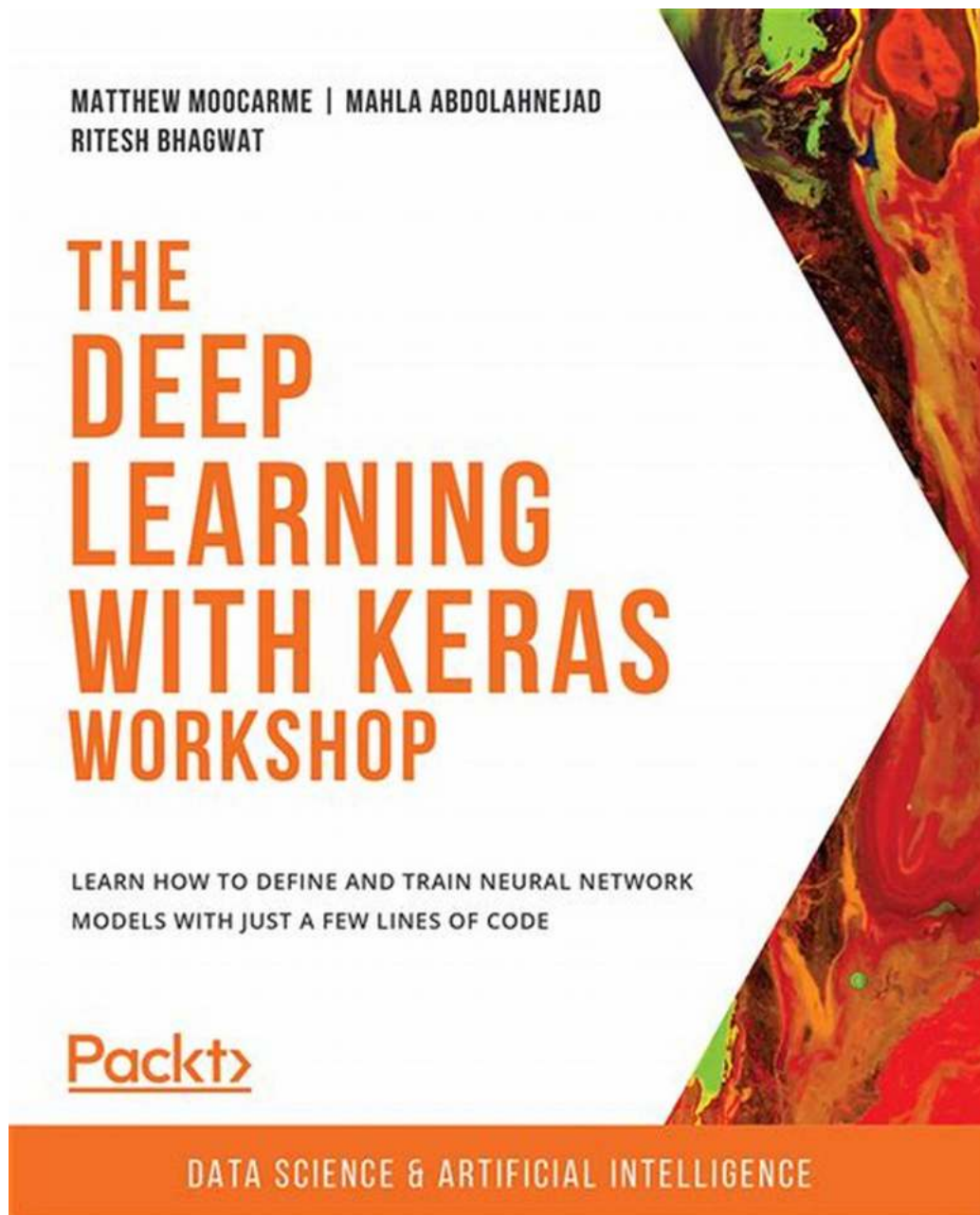


# The Deep Learning With Keras Workshop



Are you ready to dive deep into the world of artificial intelligence and learn how to create powerful neural networks? Look no further! The Deep Learning With Keras Workshop is here to give you the knowledge and skills you need to excel in the field of deep learning.

## What is Deep Learning?

Deep learning is a subset of machine learning that focuses on teaching computers to learn and make decisions in a similar way to humans. It involves the use of artificial neural networks, which are inspired by the structure and function of the human brain. These networks are capable of learning from large amounts of data, recognizing patterns, and making predictions.



### The Deep Learning with Keras Workshop: Learn how to define and train neural network models with just a few lines of code

by Matthew Mocarne (Kindle Edition)

★★★★☆ 4.3 out of 5

Language	: English
File size	: 18072 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 573 pages
Hardcover	: 131 pages
Item Weight	: 13.9 ounces
Dimensions	: 8.25 x 0.49 x 11 inches



## Why Choose Keras?

Keras is a popular deep learning library that provides a user-friendly interface to build and train deep neural networks. It is built on top of other powerful libraries like TensorFlow and Theano, making it a preferred choice for deep learning practitioners. With its simplicity and ease of use, Keras allows both beginners and experienced programmers to quickly build and experiment with deep learning models.

## **The Workshop Structure**

The Deep Learning With Keras Workshop is designed to provide a comprehensive understanding of deep learning principles and hands-on experience with Keras. The workshop is divided into multiple modules, each focusing on a specific aspect of deep learning.

### **Module 1: to Deep Learning**

- Overview of deep learning concepts
- to neural networks and their architecture
- Understanding activation functions and loss functions

### **Module 2: Getting Started with Keras**

- Installation and setup of Keras
- Creating your first neural network using Keras
- Preprocessing data for deep learning tasks

### **Module 3: Building Advanced Neural Networks**

- Understanding different network architectures
- Implementing convolutional neural networks (CNNs) for image recognition
- Building recurrent neural networks (RNNs) for sequential data processing

### **Module 4: Model Optimization and Evaluation**

- Regularization techniques to prevent overfitting
- Hyperparameter tuning for better model performance
- Evaluating model performance using various metrics

## **Module 5: Real-world Applications of Deep Learning**

- Applying deep learning to computer vision tasks
- Natural language processing and text generation using deep learning
- Deep learning in healthcare, finance, and other industries

### **Who Should Attend?**

The Deep Learning With Keras Workshop is suitable for anyone interested in gaining a strong foundation in deep learning and its practical applications.

Whether you are a student, a programmer, or a data scientist looking to upgrade your skills, this workshop will provide you with valuable insights and hands-on experience to succeed in the field of artificial intelligence.

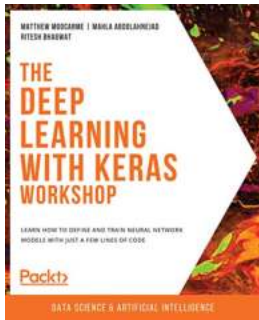
### **Takeaways**

By attending The Deep Learning With Keras Workshop, you can expect to:

- Understand the fundamental concepts of deep learning
- Be proficient in using Keras to build and train neural networks
- Gain practical experience through hands-on exercises and projects
- Learn best practices for model optimization and evaluation
- Explore real-world applications of deep learning
- Connect with like-minded individuals and industry experts

The Deep Learning With Keras Workshop offers a unique opportunity to learn and master deep learning using the powerful Keras library. Whether you're looking to kickstart a career in artificial intelligence or enhance your existing skills,

this workshop will provide you with the knowledge and experience you need to succeed.



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Discover how to leverage Keras, the powerful and easy-to-use open-source Python library for developing and evaluating deep learning models

### Key Features

- Get to grips with various model evaluation metrics, including sensitivity, specificity, and AUC scores
- Explore advanced concepts such as sequential memory and sequential modeling
- Reinforce your skills with real-world development, screencasts, and knowledge checks

## **Book Description**

New experiences can be intimidating, but not this one! This beginner's guide to deep learning is here to help you explore deep learning from scratch with Keras, and be on your way to training your first ever neural networks.

What sets Keras apart from other deep learning frameworks is its simplicity. With over two hundred thousand users, Keras has a stronger adoption in industry and the research community than any other deep learning framework.

The Deep Learning with Keras Workshop starts by introducing you to the fundamental concepts of machine learning using the scikit-learn package. After learning how to perform the linear transformations that are necessary for building neural networks, you'll build your first neural network with the Keras library. As you advance, you'll learn how to build multi-layer neural networks and recognize when your model is underfitting or overfitting to the training data. With the help of practical exercises, you'll learn to use cross-validation techniques to evaluate your models and then choose the optimal hyperparameters to fine-tune their performance. Finally, you'll explore recurrent neural networks and learn how to train them to predict values in sequential data.

By the end of this book, you'll have developed the skills you need to confidently train your own neural network models.

## **What you will learn**

- Gain insights into the fundamentals of neural networks
- Understand the limitations of machine learning and how it differs from deep learning
- Build image classifiers with convolutional neural networks

- Evaluate, tweak, and improve your models with techniques such as cross-validation
- Create prediction models to detect data patterns and make predictions
- Improve model accuracy with L1, L2, and dropout regularization

## **Who this book is for**

If you know the basics of data science and machine learning and want to get started with advanced machine learning technologies like artificial neural networks and deep learning, then this is the book for you. To grasp the concepts explained in this deep learning book more effectively, prior experience in Python programming and some familiarity with statistics and logistic regression are a must.

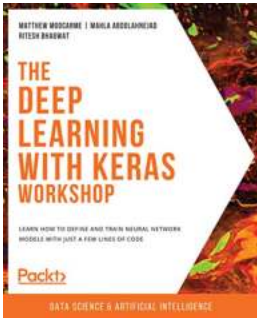
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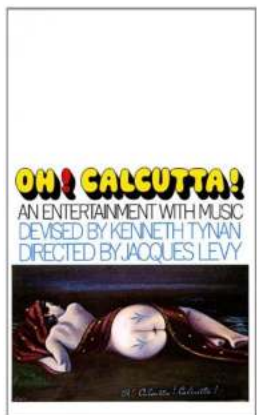
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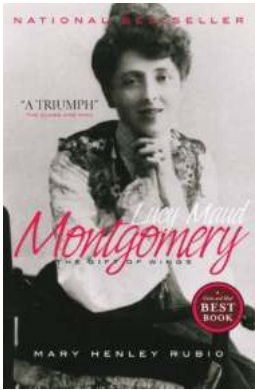
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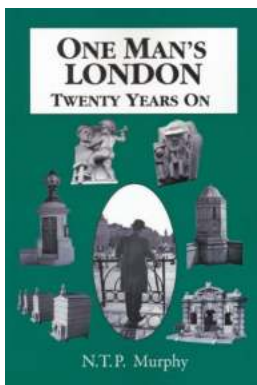
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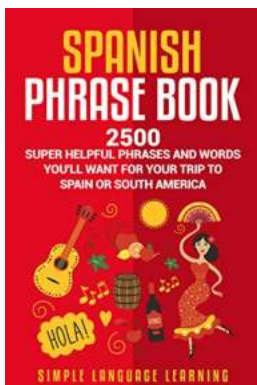
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