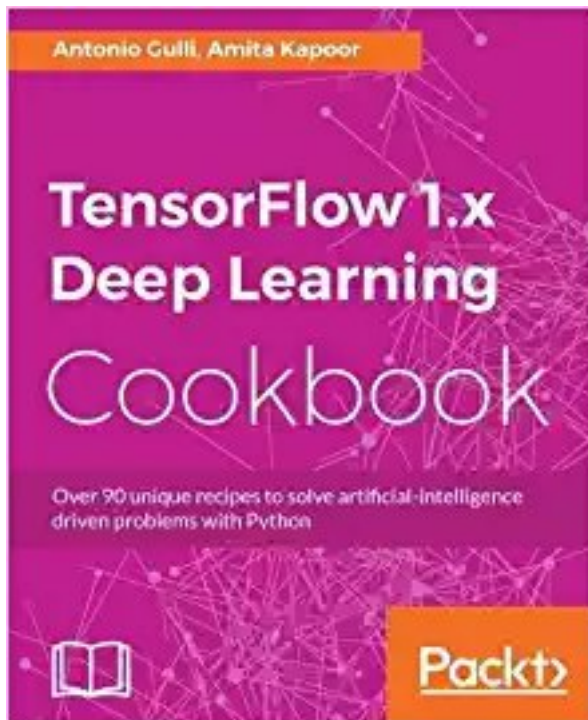# TensorFlow 1.x Deep Learning Cookbook: Over 90 unique recipes to solve artificial-intelligence driven problems with Python

TensorFlow 1.x Deep Learning Cookbook: Over 90 unique recipes to solve artificial-intelligence driven problems with Python_下载链接1_

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Key Features

Skill up and implement tricky neural networks using Google's TensorFlow 1.xAn easy-to-follow guide that lets you explore reinforcement learning, GANs, autoencoders,

multilayer perceptrons and more.Hands-on recipes to work with Tensorflow on desktop, mobile, and cloud environment

Book Description

Deep neural networks (DNNs) have achieved a lot of success in the field of computer vision, speech recognition, and natural language processing. The entire world is filled with excitement about how deep networks are revolutionizing artificial intelligence. This exciting recipe-based guide will take you from the realm of DNN theory to implementing them practically to solve the real-life problems in artificial intelligence domain.

In this book, you will learn how to efficiently use TensorFlow, Google's open source framework for deep learning. You will implement different deep learning networks such as Convolutional Neural Networks (CNNs), Recurrent Neural Networks (RNNs), Deep Q-learning Networks (DQNs), and Generative Adversarial Networks (GANs) with easy to follow independent recipes. You will learn how to make Keras as backend with TensorFlow.

With a problem-solution approach, you will understand how to implement different deep neural architectures to carry out complex tasks at work. You will learn the performance of different DNNs on some popularly used data sets such as MNIST, CIFAR-10, Youtube8m, and more. You will not only learn about the different mobile and embedded platforms supported by TensorFlow but also how to set up cloud platforms for deep learning applications. Get a sneak peek of TPU architecture and how they will affect DNN future.

By using crisp, no-nonsense recipes, you will become an expert in implementing deep learning techniques in growing real-world applications and research areas such as reinforcement learning, GANs, autoencoders and more.

What you will learn

Install TensorFlow and use it for CPU and GPU operationsImplement DNNs and apply them to solve different AI-driven problems.Leverage different data sets such as MNIST, CIFAR-10, and Youtube8m with TensorFlow and learn how to access and use them in your code.Use TensorBoard to understand neural network architectures, optimize the learning process, and peek inside the neural network black box.Use different regression techniques for prediction and classification problemsBuild single and multilayer perceptrons in TensorFlowImplement CNN and RNN in TensorFlow, and use it to solve real-world use cases.Learn how restricted Boltzmann Machines can be used to recommend movies.Understand the implementation of Autoencoders and deep belief networks, and use them for emotion detection.Master the different reinforcement learning methods to implement game playing agents.GANs and their implementation using TensorFlow.

Table of Contents

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About the Author

Antonio GulliAntonio Gulli is a transformational software executive and business leader with a passion for establishing and managing global technological talent for innovation and execution. He is an expert in search engines, online services, machine learning, information retrieval, analytics, and cloud computing. So far, he has been lucky enough to gain professional experience in four different countries in Europe and manage teams in six different countries in Europe and America. Currently, he works as site lead and director of cloud in Google Warsaw, driving European efforts for Serverless, Kubernetes, and Google Cloud UX. Previously, Antonio helped to innovate academic search as the vice president for Elsevier, a worldwide leading publisher. Before that, he drove query suggestions and news search as a principal engineer for Microsoft. Earlier, he served as the CTO for Ask, driving multimedia and news search. Antonio has filed for 20+ patents, published multiple academic papers, and served as a senior PC member in multiple international conferences. He truly believes that to be successful, you must have a great combination of management, research skills, just-get-it-done, and selling attitude.

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目录:

[TensorFlow 1.x Deep Learning Cookbook: Over 90 unique recipes to solve artificial-intelligence driven problems with Python_下载链接1_](#)

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MachineLearning

评论

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书评

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