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Autore	Atienza Rowel
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Nota di contenuto	Cover -- Copyright -- Packt upsell -- Contributors -- Table of Contents -- Preface -- Chapter 1: Introducing Advanced Deep Learning with Keras -- Why is Keras the perfect deep learning library? -- Installing Keras and TensorFlow -- Implementing the core deep learning models - MLPs, CNNs and RNNs -- The difference between MLPs, CNNs, and RNNs -- Multilayer perceptrons (MLPs) -- MNIST dataset -- MNIST digits classifier model -- Building a model using MLPs and Keras -- Regularization -- Output activation and loss function -- Optimization -- Performance evaluation -- Model summary -- Convolutional neural networks (CNNs) -- Convolution -- Pooling operations -- Performance evaluation and model summary -- Recurrent neural networks (RNNs) -- Conclusion -- Chapter 2: Deep Neural Networks -- Functional API -- Creating a two-input and one-output model -- Deep residual networks (ResNet) -- ResNet v2 -- Densely connected convolutional networks (DenseNet) -- Building a 100-layer DenseNet-BC for CIFAR10 -- Conclusion -- References -- Chapter 3: Autoencoders -- Principles of autoencoders -- Building autoencoders using Keras -- Denoising autoencoder (DAE) -- Automatic colorization autoencoder -- Conclusion -- References -- Chapter 4: Generative Adversarial Networks (GANs) -- An overview of GANs -- Principles of GANs -- GAN implementation in Keras --

Conditional GAN -- Conclusion -- References -- Chapter 5: Improved GANs -- Wasserstein GAN -- Distance functions -- Distance function in GANs -- Use of Wasserstein loss -- WGAN implementation using Keras -- Least-squares GAN (LSGAN) -- Auxiliary classifier GAN (ACGAN) -- Conclusion -- References -- Chapter 6: Disentangled Representation GANs -- Disentangled representations -- InfoGAN -- Implementation of InfoGAN in Keras -- Generator outputs of InfoGAN -- StackedGAN -- Implementation of StackedGAN in Keras.
Generator outputs of StackedGAN -- Conclusion -- Reference -- Chapter 7: Cross-Domain GANs -- Principles of CycleGAN -- The CycleGAN Model -- Implementing CycleGAN using Keras -- Generator outputs of CycleGAN -- CycleGAN on MNIST and SVHN datasets -- Conclusion -- References -- Chapter 8: Variational Autoencoders (VAEs) -- Principles of VAEs -- Variational inference -- Core equation -- Optimization -- Reparameterization trick -- Decoder testing -- VAEs in Keras -- Using CNNs for VAEs -- Conditional VAE (CVAE) -- -VAE: VAE with disentangled latent representations -- Conclusion -- References -- Chapter 9: Deep Reinforcement Learning -- Principles of reinforcement learning (RL) -- The Q value -- Q-Learning example -- Q-Learning in Python -- Nondeterministic environment -- Temporal-difference learning -- Q-Learning on OpenAI gym -- Deep Q-Network (DQN) -- DQN on Keras -- Double Q-Learning (DDQN) -- Conclusion -- References -- Chapter 10: Policy Gradient Methods -- Policy gradient theorem -- Monte Carlo policy gradient (REINFORCE) method -- REINFORCE with baseline method -- Actor-Critic method -- Advantage Actor-Critic (A2C) method -- Policy Gradient methods with Keras -- Performance evaluation of policy gradient methods -- Conclusion -- References -- Other Books You May Enjoy -- Index.

Sommario/riassunto

A comprehensive guide to advanced deep learning techniques, including Autoencoders, GANs, VAEs, and Deep Reinforcement Learning, that drive today's most impressive AI results Key Features Explore the most advanced deep learning techniques that drive modern AI results Implement Deep Neural Networks, Autoencoders, GANs, VAEs, and Deep Reinforcement Learning A wide study of GANs, including Improved GANs, Cross-Domain GANs and Disentangled Representation GANs Book Description Recent developments in deep learning, including GANs, Variational Autoencoders, and Deep Reinforcement Learning, are creating impressive AI results in our news headlines - such as AlphaGo Zero beating world chess champions, and generative AI that can create art paintings that sell for over $400k because they are so human-like. Advanced Deep Learning with Keras is a comprehensive guide to the advanced deep learning techniques available today, so you can create your own cutting-edge AI. Using Keras as an open-source deep learning library, you'll find hands-on projects throughout that show you how to create more effective AI with the latest techniques. The journey begins with an overview of MLPs, CNNs, and RNNs, which are the building blocks for the more advanced techniques in the book. You'll learn how to implement deep learning models with Keras and Tensorflow, and move forwards to advanced techniques, as you explore deep neural network architectures, including ResNet and DenseNet, and how to create Autoencoders. You then learn all about Generative Adversarial Networks (GANs), and how they can open new levels of AI performance. Variational AutoEncoders (VAEs) are implemented, and you'll see how GANs and VAEs have the generative power to synthesize data that can be extremely convincing to humans - a major stride forward for modern AI. To complete this set of advanced techniques, you'll learn how to implement Deep

Reinforcement Learning (DRL) such as Deep Q-Learning and Policy Gradient Methods, which are critical to many modern results in AI. What you will learn Cutting-edge techniques in human-like AI performance Implement advanced deep learning models using Keras The building blocks for advanced techniques - MLPs, CNNs, and RNNs Deep neural networks ? ResNet and DenseNet Autoencoders and Variational AutoEncoders (VAEs) Generative Adversarial Networks (GANs) and creative AI techniques Disentangled Representation GANs, and Cross-Domain GANs Deep Reinforcement Learning (DRL) meth...