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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...