Record Nr. UNINA9910483468203321 Autore Koonce Brett Titolo Convolutional neural networks with Swift for Tensorflow: image recognition and dataset categorization / / Brett Koonce Pubbl/distr/stampa [Place of publication not identified]: .: Apress. . [2021] ©2021 **ISBN** 1-4842-6168-2 Edizione [1st ed. 2021.] Descrizione fisica 1 online resource (XXI, 245 p. 1 illus.) Disciplina 006.32 Soggetti TensorFlow Neural networks (Computer science) Data sets Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Chapter 1: MNIST: 1D Neural Network -- Chapter 2: MNIST: 2D Neural Network -- Chapter 3: CIFAR: 2D Nueral Network with Blocks --Chapter 4: VGG Network -- Chapter 5: Resnet 34 -- Chapter 6: Resnet 50 -- Chapter 7: SqueezeNet -- Chapter 8: MobileNrt v1 -- Chapter 9: MobileNet v2 -- Chapter 10: Evolutionary Strategies -- Chapter 11: MobileNet v3 -- Chapter 12: Bag of Tricks -- Chapter 13: MNIST Revisited -- Chapter 14: You are Here. Sommario/riassunto Dive into and apply practical machine learning and dataset categorization techniques while learning Tensorflow and deep learning. This book uses convolutional neural networks to do image recognition all in the familiar and easy to work with Swift language. It begins with a basic machine learning overview and then ramps up to neural networks and convolutions and how they work. Using Swift and Tensorflow, you'll perform data augmentation, build and train large networks, and build networks for mobile devices. You'll also cover cloud training and the network you build can categorize greyscale data, such as mnist, to large scale modern approaches that can categorize large datasets, such as imagenet. Convolutional Neural Networks with Swift for Tensorflow

uses a simple approach that adds progressive layers of complexity until you have arrived at the current state of the art for this field. You will:

Categorize and augment datasets Build and train large networks, including via cloud solutions Deploy complex systems to mobile devices.