ıg and Generative Models in Keras

terms is essential when working in the industry, participating in user groups, and participating in other certificate programs.

ng used to identify unusual data points that do not fit the general pattern in a dataset.
t can be used instead of the classical stochastic gradient descent procedure to update network weights iteratively based on training data.
here the generator and discriminator networks are trained simultaneously, with the generator aiming to fool the discriminator, and the discriminator trying to ake data.
d to learn efficient representations of data, often for dimensionality reduction or feature learning.
classification tasks, often utilized in training neural networks to measure the difference between predicted and actual outputs.
d layer in an autoencoder that contains the most critical features of the input data.
arning that involves grouping data points into clusters, where data points in the same cluster are more similar to each other.
ses convolutional layers, making it particularly effective for tasks involving image data.
k commonly used in image processing tasks, known for its ability to capture spatial hierarchies in images.
the diversity of data available for training models by generating new synthetic data, often by applying transformations to existing data.
hat reconstructs the input data from the compressed latent space representation.
se from data, such as images, to improve their quality.
rticles spread from regions of high concentration to low concentration; in diffusion models, this concept is simulated to generate or enhance data.
tive model that iteratively refines noisy data to produce high-quality samples, often used in image generation.
arning that reduces the number of random variables under consideration by obtaining a set of principal variables.
etwork (GAN), this network evaluates the authenticity of the generated data, distinguishing between real and fake data.
hat compresses the input data into a latent-space representation.
h refers to one complete pass of the training dataset through the learning algorithm.
a machine to automatically discover the representations needed for feature detection or classification from raw data.
ess of gradually adding noise to data over a series of steps.
s in Keras that allows for more flexible model architectures than the Sequential API.
here two networks, the generator and the discriminator, compete against each other, leading to the generation of realistic data.
creates synthetic data from random noise, aiming to produce data that closely resembles real data.
ere an image from one domain is transformed into an image in another domain, such as converting a sketch into a photo.
e that partitions a dataset into distinct groups based on the features of the data points.
ary that provides a Python interface for artificial neural networks and is used to create deep learning models.
nput data generated by the encoder in an autoencoder.
en digits that is commonly used for training image processing systems and machine learning models.
en digits commonly used for training various image processing systems.