



Figure 30-1. TensorFlow API hierarchy

The Low-Level TensorFlow APIs

The low-level API gives the tools for building network graphs from the ground up using mathematical operations. This API level affords the greatest level of flexibility to tweak and tune the model as desired. Moreover, the higher-level APIs implement low-level operations under the hood.

The Mid-Level TensorFlow APIs

TensorFlow provides a set of reusable packages for simplifying the process involved in creating neural network models. Some examples of these functions include the layers (**tf.keras.layers**), Datasets (**tf.data**), metrics (**tf.keras.metrics**), loss (**tf.keras.losses**), and FeatureColumns (**tf.feature_column**) packages.

Layers

The layers package (**tf.keras.layers**) provides a handy set of functions to simplify the construction of layers in a neural network architecture. For example, consider the convolutional network architecture in Figure 30-2 and how the layers API simplifies the creation of the network layers.