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Section 1: Neural Network Fundamentals

This section provides a basic introduction to machine learning and the important concepts of neural networks and deep learning.

This section comprises the following chapters:

- `Chapter 1`, *What is Machine Learning?*
- `Chapter 2`, *Neural Networks and Deep Learning*

2
Section 2: TensorFlow Fundamentals

This section shows how TensorFlow 2.0 works and the differences compared with version 1.x. This section also covers how to define a complete machine learning pipeline, from data acquisition, passing through the model definition, and how the graph of TensorFlow 1.x is still present in TensorFlow 2.0.

This section comprises the following chapters:

- `Chapter 3`, *TensorFlow Graph Architecture*
- `Chapter 4`, *TensorFlow 2.0 Architecture*
- `Chapter 5`, *Efficient Data Input Pipelines and Estimator API*

3
Section 3: The Application of Neural Networks

This section teaches you how to implement various neural network applications in a variety of domains and demonstrates how powerful neural networks are, especially when used with a good framework such as TensorFlow. At the end of this section, you will have theoretical, as well as practical, knowledge of different neural network architectures, and you will know how to implement them and how to put a model into production using the SavedModel format.

This section comprises the following chapters:

- `Chapter 6`, *Image Classification Using TensorFlow Hub*
- `Chapter 7`, *Introduction to Object Detection*
- `Chapter 8`, *Semantic Segmentation and Custom Dataset Builder*
- `Chapter 9`, *Generative Adversarial Networks*
- `Chapter 10`, *Bringing a Model to Production*

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