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Third Edition

Hands-On Machine Learning with Scikit-Learn, Keras & TensorFlow

Concepts, Tools, and Techniques to Build Intelligent Systems

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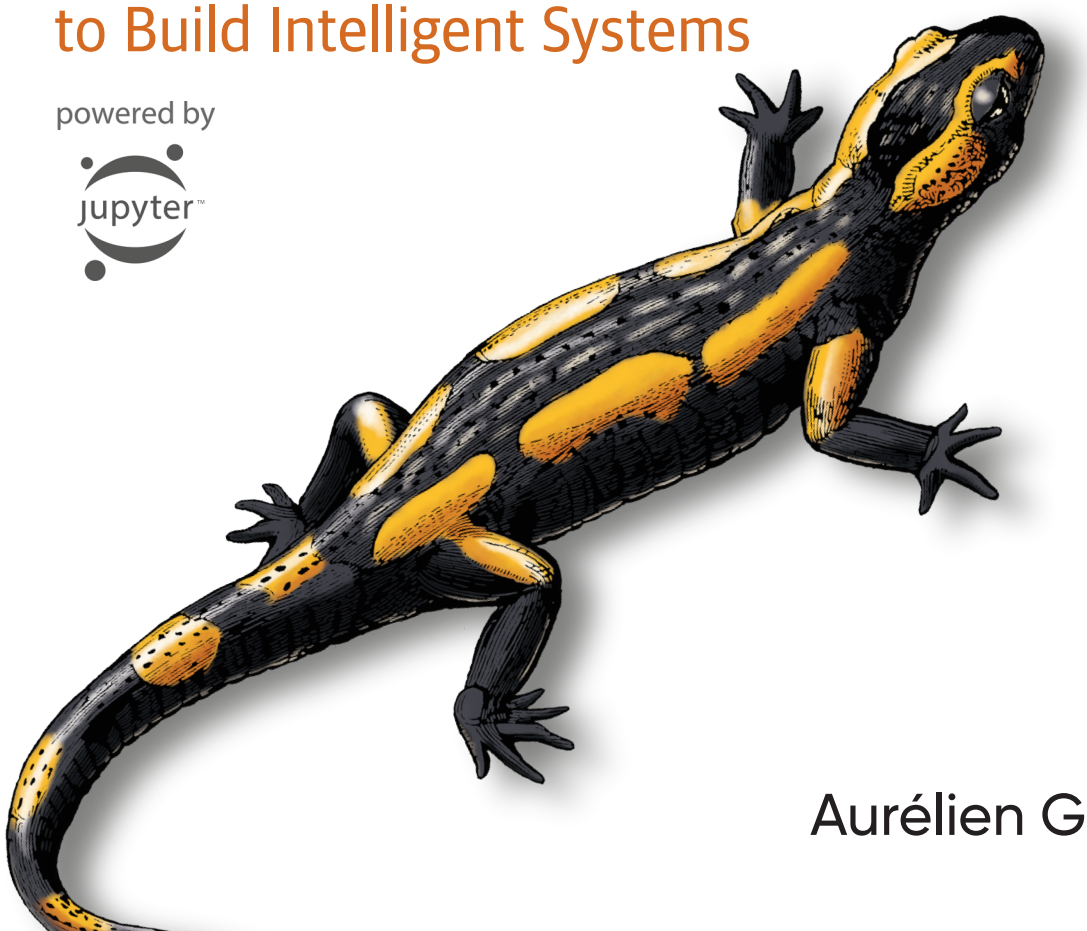

Aurélien Géron

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Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow

Through a recent series of breakthroughs, deep learning has boosted the entire field of machine learning. Now, even programmers who know close to nothing about this technology can use simple, efficient tools to implement programs capable of learning from data. This bestselling book uses concrete examples, minimal theory, and production-ready Python frameworks (Scikit-Learn, Keras, and TensorFlow) to help you gain an intuitive understanding of the concepts and tools for building intelligent systems.

With this updated third edition, author Aurélien Géron explores a range of techniques, starting with simple linear regression and progressing to deep neural networks. Numerous code examples and exercises throughout the book help you apply what you've learned. Programming experience is all you need to get started.

- **Use Scikit-Learn to track an example ML project end to end**
- **Explore several models, including support vector machines, decision trees, random forests, and ensemble methods**
- **Exploit unsupervised learning techniques such as dimensionality reduction, clustering, and anomaly detection**
- **Dive into neural net architectures, including convolutional nets, recurrent nets, generative adversarial networks, autoencoders, diffusion models, and transformers**
- **Use TensorFlow and Keras to build and train neural nets for computer vision, natural language processing, generative models, and deep reinforcement learning**

Aurélien Géron is a machine learning consultant. A former Googler, he led YouTube's video classification team from 2013 to 2016. He was also a founder and CTO of Wifirst from 2002 to 2012, a leading wireless ISP in France, and a founder and CTO of Polyconseil in 2001, a telecom consulting firm.

"An exceptional resource to study machine learning. You will find clear-minded, intuitive explanations, and a wealth of practical tips."

—François Chollet
Author of Keras, author of *Deep Learning with Python*

"This book is a great introduction to the theory and practice of solving problems with neural networks; I recommend it to anyone interested in learning about practical ML."

—Pete Warden
Mobile Lead for TensorFlow

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Table of Contents