

Machine Learning with TensorFlow

NISHANT SHUKLA
KENNETH FRICKLAS, SENIOR TECHNICAL EDITOR

/M
MANNING
SHELTER ISLAND

brief contents

PART 1 YOUR MACHINE-LEARNING RIG **1**

- 1 • A machine-learning odyssey 3
- 2 • TensorFlow essentials 25

PART 2 CORE LEARNING ALGORITHMS **51**

- 3 • Linear regression and beyond 53
- 4 • A gentle introduction to classification 71
- 5 • Automatically clustering data 99
- 6 • Hidden Markov models 119

PART 3 THE NEURAL NETWORK PARADIGM **133**

- 7 • A peek into autoencoders 135
- 8 • Reinforcement learning 153
- 9 • Convolutional neural networks 169
- 10 • Recurrent neural networks 189
- 11 • Sequence-to-sequence models for chatbots 201
- 12 • Utility landscape 223