

BRIEF CONTENTS

Introduction

PART I: FOUNDATIONAL IDEAS

Chapter 1: An Overview of Machine Learning Techniques

Chapter 2: Essential Statistical Ideas

Chapter 3: Probability

Chapter 4: Bayes' Rule

Chapter 5: Curves and Surfaces

Chapter 6: Information Theory

PART II: BASIC MACHINE LEARNING

Chapter 7: Classification

Chapter 8: Training and Testing

Chapter 9: Overfitting and Underfitting

Chapter 10: Data Preparation

Chapter 11: Classifiers

Chapter 12: Ensembles

PART III: DEEP LEARNING BASICS

Chapter 13: Neural Networks

Chapter 14: Backpropagation

Chapter 15: Optimizers

PART IV: BEYOND THE BASICS

Chapter 16: Convolutional Neural Networks

Chapter 17: Convnets in Practice

Chapter 18: Autoencoders

Chapter 19: Recurrent Neural Networks

Chapter 20: Attention and Transformers

Chapter 21: Reinforcement Learning

Chapter 22: Generative Adversarial Networks

Chapter 23: Creative Applications

Index