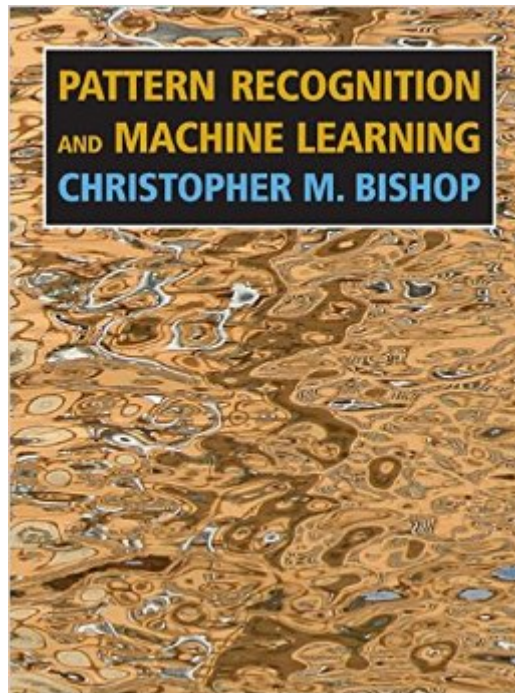# Pattern Recognition And Machine Learning (Information Science And Statistics)

# Synopsis

This is the first textbook on pattern recognition to present the Bayesian viewpoint. The book presents approximate inference algorithms that permit fast approximate answers in situations where exact answers are not feasible. It uses graphical models to describe probability distributions when no other books apply graphical models to machine learning. No previous knowledge of pattern recognition or machine learning concepts is assumed. Familiarity with multivariate calculus and basic linear algebra is required, and some experience in the use of probabilities would be helpful though not essential as the book includes a self-contained introduction to basic probability theory.

# Book Information

Series: Information Science and Statistics

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# Customer Reviews

I can appreciate others who might think that this is a great book.... but I am a student using it and I have some very different opinions of it.First, although Mr. Bishop is clearly an expert in Machine Learning, he is also obviously a HUGE fan of Bayesian Statistics. The title of the book is misleading as it makes no mention of Bayes at all but EVERY CHAPTER ends with how all of the chapter's contents are combined in a Bayes method. That's not bad it's just not clear from the title. The title should be appended with "... using Bayesian Methods"Second, while it is certainly a textbook, the author clearly has an understanding of the material that seems to undermine his ability to explain it. Though there are mentions of examples there are, in fact, none. There are many graphics and tiny, trivial indicators, but I can't help to think that every single one of the concepts in the book would

have benefited from even a single application. There aren't any. I am lead to believe that if you are already aware of many of the methods and techniques that this would be an excellent reference or refresher. As a student starting out I almost always have no idea what his intentions are.To make matter worse, he occasionally uses symbols that are flat-out confusing. Why would you use PI for anything other than Pi or Product? He does. Why use little k, Capital K, and Greek Letter Kappa (a K!) in a series of explanations. He does. He even references articles that he has written... in 2008!!Every chapter seems to be an exercise to see how many equations he can stuff in it. There are 300 in Chapter 2 alone.

Pattern Recognition and Machine Learning (Information Science and Statistics) 300+ Mathematical Pattern Puzzles: Number Pattern Recognition & Reasoning (Improve Your Math Fluency) Unsupervised Deep Learning in Python: Master Data Science and Machine Learning with Modern Neural Networks written in Python and Theano (Machine Learning in Python) Deep Learning in Python Prerequisites: Master Data Science and Machine Learning with Linear Regression and Logistic Regression in Python (Machine Learning in Python) Convolutional Neural Networks in Python: Master Data Science and Machine Learning with Modern Deep Learning in Python, Theano, and TensorFlow (Machine Learning in Python) Deep Learning in Python: Master Data Science and Machine Learning with Modern Neural Networks written in Python, Theano, and TensorFlow (Machine Learning in Python) Deep Learning: Recurrent Neural Networks in Python: LSTM, GRU, and more RNN machine learning architectures in Python and Theano (Machine Learning in Python) Using Speech Recognition Software: Dragon NaturallySpeaking and Windows Speech Recognition, Second Edition Unsupervised Machine Learning in Python: Master Data Science and Machine Learning with Cluster Analysis, Gaussian Mixture Models, and Principal Components Analysis Machine Learning: A Probabilistic Perspective (Adaptive Computation and Machine Learning series) Foundations of Machine Learning (Adaptive Computation and Machine Learning series) Introduction to Machine Learning (Adaptive Computation and Machine Learning series) Gaussian Processes for Machine Learning (Adaptive Computation and Machine Learning series) Bioinformatics: The Machine Learning Approach, Second Edition (Adaptive Computation and Machine Learning) Machine Learning with Spark - Tackle Big Data with Powerful Spark Machine Learning Algorithms Candlepower: Advanced Candlestick Pattern Recognition and Filtering Techniques for Trading Stocks and Futures Pattern Recognition Flash Cards Practice for Pre-School and Kindergarten Entry Assessment Tests Genetic Algorithms for Pattern Recognition Optical Pattern Recognition Practical Pulmonary Pathology: A Diagnostic Approach: A Volume in

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