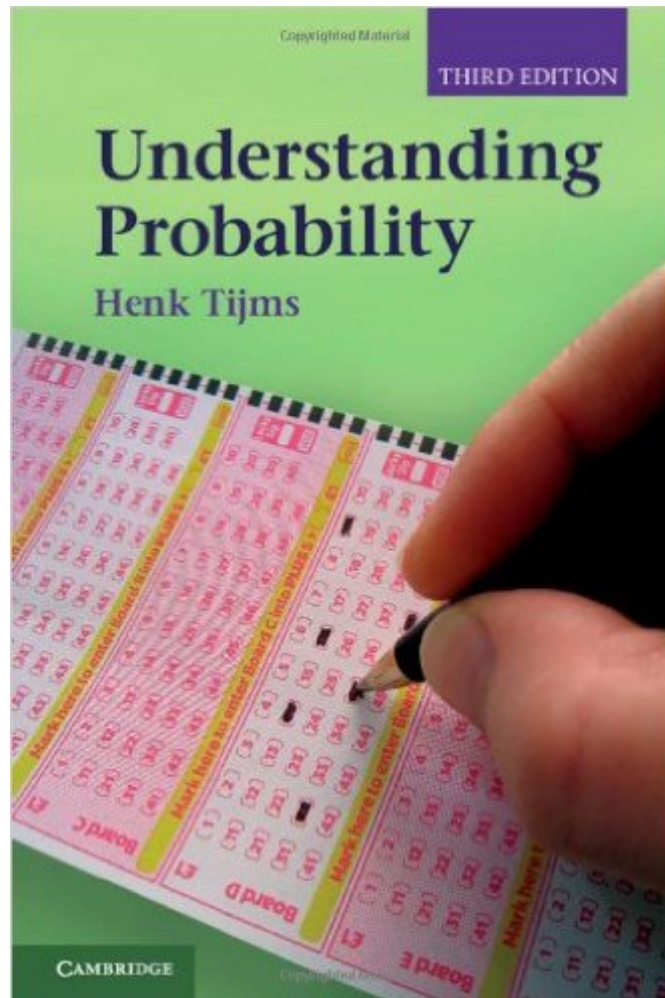# Understanding Probability

Synopsis

Understanding Probability is a unique and stimulating approach to a first course in probability. The first part of the book demystifies probability and uses many wonderful probability applications from everyday life to help the reader develop a feel for probabilities. The second part, covering a wide range of topics, teaches clearly and simply the basics of probability. This fully revised third edition has been packed with even more exercises and examples and it includes new sections on Bayesian inference, Markov chain Monte-Carlo simulation, hitting probabilities in random walks and Brownian motion, and a new chapter on continuous-time Markov chains with applications. Here you will find all the material taught in an introductory probability course. The first part of the book, with its easy-going style, can be read by anybody with a reasonable background in high school mathematics. The second part of the book requires a basic course in calculus.

Book Information

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Customer Reviews

This is a peerless introductory textbook. It starts very gently and relying on intuition and only later introduces rigor in a manageable way. There are lots of exercises and examples: this is a book to be followed with pencil and lots of paper. On the back side I wished that some of the examples were more thoroughly explained. In particular there are a handful cases where the author just states an "obvious" probability model and then goes on solving it without further explanations and leaving the students hanging on without a clue on why the model was specified that way. I also think there are more than enough examples using casino and card games. I wished to see more examples related

to the natural sciences and engineering, where you usually do not have the advantage of knowing the sample space of the problem! These comments notwithstanding, a great book that is also a joy to read. Perfect for both the classroom and for self-study!

I used this as the textbook in an undergraduate course on probability. I enjoyed it a lot. It has many delightful examples drawn from court cases, gambling, and other real situations. The author's love and enthusiasm for the subject shows on every page. However, my students found the book incomprehensible. When I polled my class of 65 students after 8 weeks, I was shocked to discover that all 65 of them preferred to have no textbook at all than to have this one. The first half is intended to build one's intuition but is crammed with counter-intuitive examples and clever, elegant arguments that novices cannot appreciate. Formalism is delayed until the second half. If I had to do it over again, I would start with the second half, which is logical and self-contained, and finish with some of the cleverness in the first half. But I will never teach beginners from this book again.

As an instructor who has taught an introductory probability course many times, I find the third edition of Understanding Probability an excellent textbook for a first course in probability. The author is known for his expertise and enthusiasm for probability, and this book captures that spirit. Drawing from rich and spellbinding examples, he illustrates the basic principles and ideas of probability and statistics in a clear and intuitive way that students will find illuminating. The material on conditional probabilities and Bayesian inference is the best introductory material on these topics I have ever seen. The book's historical comments, well-designed exercises, and explanations of famous paradoxes all add to the pleasure of exploring and understanding probability. Overall, the book does a very nice job at finding a balance between rigor and readability.

I just bought the latest (3rd) edition of this book from my local bookstore.After a quick view, my rating is obviously just typical.I have to notice however, the following.Paragraph 2.2 (Basic probability concepts)...page 29. There is an example concerning Efron's dice game, which issolved wrongly (!!!) in contrast with the second edition of the book, where it is solved correctly !!!The correct answer is 4/6 and not 5/6 as the third edition claims.The error is easy for someone to spot, but i don't know if in later chapters some really difficult examples / exercisesmislead the reader.Anyway, a very good book with very interesting contents

I liked this book for several reasons. First, the examples and problems are relevant, clear, and

instructive. I am familiar with the most commonly used textbooks for introductory probability, but those books cannot match the examples and problems in Understanding Probability. Second, the author writes with crystal clarity and presents the right approach to problem solving. The book helps you very much in mastering the theory and solving problems on your own. The explanations are down-to-earth and accessible. Last, the price of the book. More value for your money compared with other introductory probability books. I highly recommend the book.

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