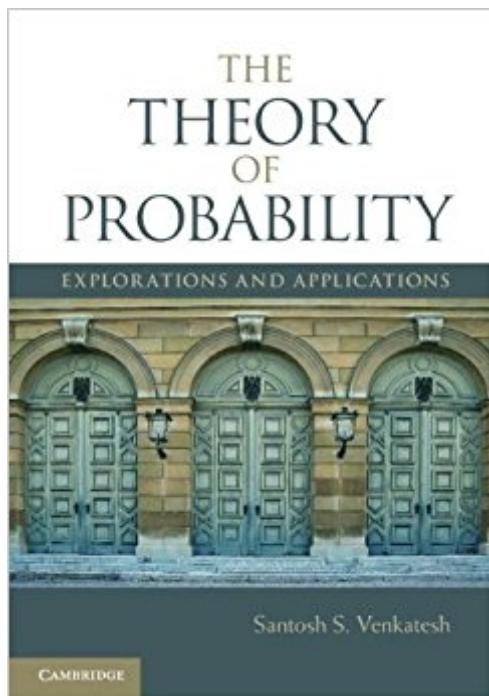**The book was found**

The Theory Of Probability: Explorations And Applications

Synopsis

From classical foundations to advanced modern theory, this self-contained and comprehensive guide to probability weaves together mathematical proofs, historical context and richly detailed illustrative applications. A theorem discovery approach is used throughout, setting each proof within its historical setting and is accompanied by a consistent emphasis on elementary methods of proof. Each topic is presented in a modular framework, combining fundamental concepts with worked examples, problems and digressions which, although mathematically rigorous, require no specialised or advanced mathematical background. Augmenting this core material are over 80 richly embellished practical applications of probability theory, drawn from a broad spectrum of areas both classical and modern, each tailor-made to illustrate the magnificent scope of the formal results. Providing a solid grounding in practical probability, without sacrificing mathematical rigour or historical richness, this insightful book is a fascinating reference and essential resource, for all engineers, computer scientists and mathematicians.

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Customer Reviews

"This is a remarkable book, a theory of probability that succeeds in being both readable and rigorous, both expository and entertaining. One might have thought that there was no space left in the market for books on the fundamentals of probability theory, but this volume provides a refreshing new approach ... it is a magnificent undertaking, impeccably presented, and one that is sure to reward repeated reading." Tom Fanshawe, Significance (magazine of The Royal Statistical

Society)"... well-written, and although the topics are discussed with all mathematical rigour, it usually does not exceed the capabilities of an advanced undergraduate student ... it can be recommended without constraint as a textbook for advanced undergraduates, but also as a reference and interesting read for experts." Manuel Vogel, Contemporary Physics

From classical foundations to advanced modern theory, this self-contained and comprehensive guide to probability uses a pedagogical focus on discovery and elementary methods of proof to weave together mathematical proofs, historical context and richly detailed illustrative applications. A fascinating reference and essential resource for engineers, computer scientists and mathematicians.

In college I was left with the distorted idea that probability theory is a sub-field of measure theory. Growing older it dawned on me that something else is at work in probability. Yes, probabilists do use heavily measure theoretic concepts, but they are guided by a different star I would call probabilistic thinking. I could not easily define what I mean by probabilistic thinking. You have to look at a couple of problems that motivated research in this field to understand this. I believe that the only way to understand probability is through many concrete examples.This book has a marvelous and eclectic collection of classic and very modern examples. The author, who is clearly passionate about this stuff does a superb job presenting all the facets of these examples. The intended audience is a person with a moderate level of mathematical sophistication and the author has that person in mind at all times. He goes beyond the formalities of a proof and often he gives suggestive heuristics which are extremely helpful in unraveling the details. I have to say he does not go for the trivial. Most the examples discussed are far from trivial, many describing ground-breaking results, but they all are intellectually extremely rewarding. The historical anecdotes and the very elegant language enhance the overall experience.The theory is very precisely presented, but it plays a secondary role to the examples. The number of topics covered may seem small when compared to the size of the book. However, what may seem to have been lost in breadth, is more than made up in depth.This is a carefully conceived and produced nice book ideally suited to motivated beginner in probability. I open it often at random and go through an example knowing that it will brighten my day. Try it and you will be rewarded.

The book is excellent, but I find one major flaw. It would be much better if the reader had access to the web site featured on the back cover which promotes the 500 homework problems and 250

worked examples that are included. These are accessible only for those of us who are using the volume to teach a course. If this were correctly advertised, some potential buyers (like me) might seek other titles.

I've had trouble with measure theory for a long time. This book cleared the topic up well.

I bought this book right after I completed the coursera online course Probability offered by Univ of Penn Professor Venkatesh. For me, it was the greatest series of speeches since Lincoln's Cooper Union address. Dr. Venkatesh's command of English, and his full force of reasoning and logic, is a wonder to behold.Now back to the book. It is not possible to overstate how good this book is. I tried to give it 10 stars, five is an insult.You have taken all the lower division courses in engineering or computer science, data structure, algorithm, programming languages, a little probability in discrete math, linear algebra, or whatever they do at your institution of higher learning. You can write a mobile application and show your grandma how cool that works on her smart phone. Now it's time to get serious. you are thirsty for something meatier and more intellectual.Get this book. Start at page one. Read until you come to the word Example or Theorem. Do not read the solution or proof. Solve or prove it yourself. Or at least try. If you get stuck read a line or two until you see what to do.Thrust, repeat.If you make it through the first six or seven chapters like this then there shall be no power in the universe that can stop you. Enjoy graduate school. You are half way there.Some people complain about this book not practical enough for engineers. Don't listen to them. They are just trying to pull you down and keep you from your true destiny. They are the same people who try to sell you TV and lobotomies."but this book is one that few besides mathematicians will appreciate. Engineers and other practical-minded folks should take his course but lookfor another book..."Not appreciated? Judas just stick a dagger in my heart. This is THE book that blends theory and application, providing all kinds of flavors for thethought experiments, or Gedenken experiments. All the examples are beautifully practical and thought provoking. The theorems are introduced in appropriate places, and with rigor. Sloppiness is doing you no favor whatsoever. The material needs no motivation, it is motivation per se. Just do it. Faith will come. He's teaching you probability. Not selling you a used car. By the time you are ready to read this book you should not need motivation from the author as to why you need to know probability in depth. You should just feel a burning in you chest that can only be quenched by arguments leading to Chebyshev's inequality and Central limit theorem.Maybe the complainer had a point, as we know probabilistically that nowadays half of the engineers/computer scientists are either loafing around or producing bugs; while half of the

other half are only marginally competent, they can only strictly follow cookbook recipes. Only about a quarter are good enough. Those are the people this book targets, along with mathematicians and physicists.The same people who complained may be scared by the level of abstraction, which let me just say is not that high. If you want to see abstraction grab a copy of Spanier's 'Algebraic Topology' and stare at it for about an hour. Then open this book up again. I promise you it is the feeling you get when you sit in a hot-tub for like twenty minutes and then jump back in the pool. Invigorating.Anyway, It's lame that some people, who have no desire, will or capacity to seriously study a book, are calling it unpractical and giving it two stars. How more practical can you get than this book. It's loaded with practical stuff. It's unethical to use another text for an upper level undergraduate probability class. It insults and short changes the students. Sure it was OK before Dr. Venkatesh wrote the thing to use another text such as Sheldon Ross or Bertseka and Tsitsiklis, but now? Why spit on your luck? And if you'r a student and find the book too hard? Try harder. That's the point. If you did not crave intellectual work why are you sitting in a probability course? He is not trying to teach you or your high school drop-out friends how to fry a burger or milk a cow, for sure. You need to dig in. It will make you a better person. Trust me. Or you could just change your major to go to MBA, medical or law school . It's more money and the books always have real world nice stories to tell. Or maybe milking a cow is your true calling.Oh, and if you can solve the harder (dangerous bend) problems in Venkatesh's book, with 95% confidence level, you can do pretty much anything in the world, so it's a major confidence booster!In conclusion: Thank you Dr. Venkatesh for your wondrous book on probability, arguably the best since William Feller's classic. You inspired and promised to make a man of me. I heed you.

Excellent.

Amazing book!The book is very academic, and there are no shortcuts. Most books of this level are extremely boring, and it is hard to see what is going on, and why "all this" is even necessary. Not this book. For most definitions, the author explains why we need them done in this way, and what will happen if we omit certain requirements. I know precisely why I am reading each chapter, and why it is "right" that the underlying theory looks like this.The author is extremely smart, and has apparently spent a lot of time studying all the related subjects in fine detail. It would probably take me 10 carefully selected books and quite a bit of thinking to arrive at what I can simply read off the pages of this book.Even chapters with not very promising titles like appendix section about L2 functions, and Lebesgue measure chapter (from which I didn't expect much) are very vivid, and full

of purpose.I was looking for some particular answers in this book, and I now need to move on with my very dense learning plan. I wish I had more time to finish the book right now. I am coming back to read it from cover to cover (for leisure! I can't believe I am doing that) as soon as I patch up holes in the other areas of my learning plan.

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