A First Course in Probability for Computer and Data Science
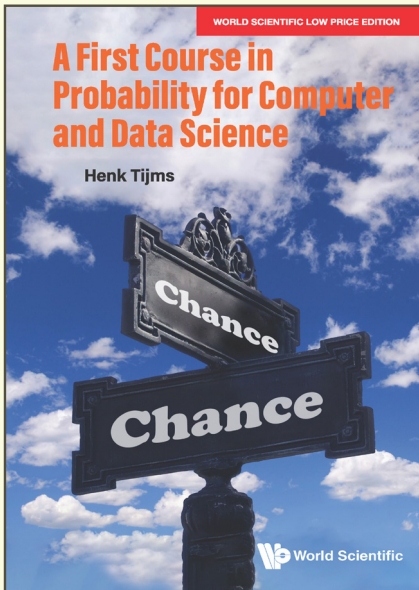
By **Henk Tijms**
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ABOUT THE BOOK

In this undergraduate text, the author has distilled the core of probabilistic ideas and methods for computer and data science. The book emphasizes probabilistic and computational thinking rather than theorems and proofs. It provides insights and motivates the students by telling them why probability works and how to apply it.

The unique features of the book are as follows:

- Bayesian probability with real-life cases in law and medicine;
- Logistic regression and naïve Bayes;
- Real-world applications of probability;
- Interweaving Monte Carlo simulation and probability;
- Gentle introduction to Markov chains and Markov chain Monte Carlo simulation.

This book contains many worked examples. Numerous instructive problems scattered throughout the text are given along with problem-solving strategies. Several of the problems extend previously covered material. Answers to all problems and worked-out solutions to selected problems are also provided.

Henk Tijms is the author of several textbooks in the area of applied probability and stochastic optimization. In 2008, he received the prestigious INFORMS Expository Writing Award for his work. He also contributed engaging probability puzzles to *The New York Times*' former Numberplay column.

READERSHIP

Undergraduate students in computer and data science, business analytics, and operations research. Data scientists working at companies.

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ABOUT THE AUTHOR

Henk Tijms is the author of several textbooks in the areas of applied probability and stochastic optimization. He has taught probability for more than 30 years. In 2008, he received the prestigious INFORMS Expository Writing Award for his book *Understanding Probability*. Also, he has been active in popularizing probability at Dutch high schools.