

Preface

As soon as one sees this book, an immediate question arises. When there are so many books in print on the introduction to Probability and Statistics, what is the need or use of another one? I have been teaching courses in Statistics at Master's level in India at the Indian Statistical Institute and at undergraduate, graduate level at various universities in U.S.A. during the last forty two years. I have used a variety of text books for teaching undergraduate courses. Most of these books at the undergraduate level are too simplistic and problem oriented. Explanation of basic concepts and methods of Statistics need a reasonably good mathematical background. In my opinion, a good course in Calculus is a prerequisite for a First Course in Probability and Statistics. Most of the pocket calculators and computers contain Statistical packages for applying statistical methods. Overemphasis on the usage of these packages for data analysis without understanding the basic concepts is dangerous. The students must acquire the knowledge to differentiate when a method can be applied and when it cannot be. For instance, to understand what a normal probability density function is, it is not enough if I explain to them that it is unimodal, symmetric and bell-shaped. They would still need to know its functional form to compute the probabilities of various events. Keeping these ideas in mind, I tried to cover the basic concepts of Probability and Statistics in this book.

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B.L.S.Prakasa Rao
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