

Preface

A statistical distribution is a mathematical function that defines the probable occurrence of a random variable over its admissible space. Understanding statistical distributions is a fundamental requisite to researchers in almost all disciplines. The informed researcher will select the statistical distribution that best fits the data in the study at hand. This book gives a description of the group of statistical distributions that have ample application to studies in statistics and probability. Some of the distributions are well known to the general researcher and are in use in a wide variety of ways. Other useful distributions are less understood and are not in common use. This book describes when and how to apply each of the distributions in research studies, with a goal to identify the distribution that best applies to the study. The distributions are for continuous, discrete, and bivariate random variables. In most studies, the parameter values are not known a priori, and sample data is needed to estimate the parameter values. In other scenarios, no sample data is available, and the researcher seeks some insight that allows the estimate of the parameter values to be gained. This book is easy to read and includes many examples to guide the reader; it will be a highly useful reference to anyone who does statistical and probability analysis. This includes management scientists, market researchers, engineers, mathematicians, physicists, chemists, economists, social science researchers, and students in many disciplines.

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Statistical Distributions

Applications and Parameter Estimates

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