Ludovic Lebart and Jean Pierre Fenelon

STATISTIQUE ET INFORMATIQUE APPLIQUEES

(Applied Statistics and Information Processing)

Dunod, Paris, 1971, 421 pg.

As the authors mention, the work takes again, to a great extent, the Statistics chapter and, to a smaller extent, the Applicative programs from the Information Processing course. The latter belongs to the Applied Statistics Cycle, of the Statistics Institute in the Paris University, led by Daniel Duque, and whose mission is to give to the students attending it and to all people wanting a brushing up of their knowledge, a complimentary stock of theoretical and applicative notions, based upon the theory of probability and the mathematical statistics, as well as upon automatic data processing.

In order to let the reader know from the very beginning what this work may offer him, the authors specify, perhaps under a form containing a bit of humour, that in the title "Applied Statistics and Information Processing" the two important words are "and" and "applied", the reason being that a professional statistician and also an information-processing expert, well acquainted with his activity field, who would search here for new or very new things, risk to run across well-known things, exposed in another way than that used in the speciality manuals, i.e. under the form of a book meant to train and to inform the future specialists.

As a matter of fact, going over this work, we make sure that the two above-quoted words in the title express in turn, the first one the link between statistics and information processing, and the other one, the purpose of the course, more precisely its applicative character, starting from the idea that notions accompanied by practical examples are more easily assimilated and fixed in the memory.

On the basis of these premises the work consists of, or more precisely may be divided into two parts: the first one, which presents the mathematical notions necessary to train a statistician or an information-processing expert, beginning with notions, from the theory of

probability and the mathematical statistics, then passing over to covariance and regression, and from here to the second part, which comprises statistical data analysis and the verification of statistical hypotheses by means of various tests. These two parts result from a subjective decomposing of the work, but they actually form a unitary whole.

As a confirmation of the importance of the second quoted word in the title of the book, each chapter is concluded by an appendix containing applicative programs for the computation of the various magnitudes mentioned within the respective chapter.

In concluding, under the title of "general appendices", beside some notions of linear algebra and mathematical statistics, a presentation of the programming language FORTRAN is made. It is accompanied by examples and followed by a series of auxiliary programs, subroutines for the computation of the various magnitudes, necessary within the statistical research.

By the manner in which the various problems are presented, both scientifically and pedagogically, the work is accessible to a great number of readers, be they mathematicians, economists or of another profession. Even if they would not find things as in a speciality treatise, they will be attracted by the appealing manner in which all presented notions are correlated and especially by the multitude of applications it contains.

It is also worth noticing that the authors present a rich bibliography as an invitation to go thoroughly into the notions presented in the above mentioned work.

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