number of other weaknesses in the implementation of JNNURM, particularly the excessive emphasis on New Delhi. It inevitably leads to a confirmation of 'the belief that programmes of public expenditure, however massive, are not the best way to change the processes' (p. 195). Sivaramakrishnan also recognizes that in the past there have been local municipal initiatives that made a difference in India. The obvious question then is what has changed since then? And what can we do to reverse this process?

It can be no one's case that there are easy answers to these questions. But it is does not require too great an insight to recognize some of the elements of the old municipalities that are missing today. The control of the municipalities was very much more in local hands. Their administrators decided policies, implemented them and received credit for their achievements. In the post-Independence years this simple mechanism has been weakened. Policy making has been centralized on the basis that there is inadequate knowledge at the local level. The far from desirable effects on urban policy of centralized knowledge are there to see in virtually every Indian city.

On the face of it JNNURM recognizes the need for decentralization. It calls for an effective role for the urban local bodies. In theory projects are not to be funded unless these bodies are involved. But with JNNURM prescribing the best way for decentralized organizations to function, we have a contradiction in terms: centralized decentralization. Not surprisingly, most urban local bodies promise to do what is required to get their funds, and then go on to find ways not to do so.

In order to explore these larger processes we need to understand the entire dynamics of urbanization, recognizing the role that each one plays in a city. Who are the elected representatives? What are their interests in the city outside their elected office? What is the role of the other players in current urban management, including corporate houses and civil society? What is the relationship between the different interest groups and policy making? Sivaramakrishnan explores in considerable detail, the differences between the expectations of those who framed JNNURM and what has resulted in practice. But his unwillingness to get into the more hazy area of the other interests of those involved in

the implementation of JNNURM, even perfunctorily, leaves the book with an unfinished touch.

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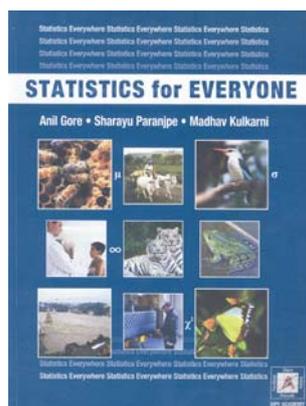
Statistics for Everyone. Anil Gore, Sharayu Paranjpe and Madhav Kulkarni. SIPF Academy Publishers and Consultants, Nalinee, Plot No. 13B, S. No. 810/A, Pakhal Road, A/P Gandhinagar, Nashik 422 101. 2009. 159 pp. Price: Rs 150.

In today's world an enormous amount of data are available, but it is getting harder to absorb everything. Statistical analysis is no longer a tool reserved for mathematicians, but one used frequently by people of varied backgrounds. There is a surplus of books on statistics catering to the needs of researchers and experts. However, a book that provides a peep into the world of statistics for a layman, one that provides the required foundation for the theory of statistical methods minus mathematical rigour has been sorely missing.

This book is aimed to motivate the use of statistics and popularize its importance. The authors, each of whom is an experienced statistician, have written the book in a style accessible to anyone with a high-school background. What sets this book apart from the plethora of texts on statistics is that common statistical concepts, tools and experimental techniques used by scientists are introduced in a perceptive and jargon-free manner. The chapters have been written keeping in

mind the needs of those who want to familiarize themselves with the concepts of statistical methods without going through dense formulas and equations. The book is modestly priced, making it accessible to a larger audience.

The book is divided into three sections. The first section is aptly called 'Numeracy for Everyone', in which the authors start out with emphasizing on understanding the importance of quantification and the different ways in which information can be represented. As the book progresses, the authors take on a hands-on approach to introduce important concepts in statistics, such as measures of central tendency, dispersion and the importance of variation. Most ideas are presented in an intuitive manner with relevant examples. For instance, using the example of the chance of getting two sons in a row, the authors cleverly introduce the concept of probability to the reader. The concept of different types of distribution, however, is tossed midway through the text, and the introduction provided in the preceding material seems inadequate. Conversely, the book is not supposed to teach you statistics, it instead provides you with the flavour of the subject. The authors go on to introduce the theory of correlation and regression and statistical testing using the chi-square test, addressing critical issues such as that of statistical inference and the risks of extrapolation. The chapters in this section end with some easy and fun-to-do exercises.

In this section I was delighted to find that one chapter has been dedicated exclusively to ecologists. The authors give a brief outline of statistical and other quantitative methods commonly used in ecology, such as diversity indices and different census techniques, and the limitations thereof. Here again, the authors are gentle in their approach and consciously avoid using technical mumbo-jumbo.

In the early years of my research, the questions that bothered me the most were about deciding how much and how to sample in order to optimize sampling effort. The authors address this concern and explain using examples how the choice of sampling strategy and experimental design depends on the question being asked. An introduction to some sampling techniques and experimental designs is provided to elaborate on this issue. This section is of particular use to

young scholars interested in pursuing a career in research, as it addresses some fundamental issues regarding sampling strategy and experimental design, both of which are the foundation of any scientific study. The remaining chapters in this section deal with the importance of statistics in the fields of medicine and public health, social sciences and industry. The authors encourage the readers to communicate with them if they need advice on dealing with their statistical problems, or to merely indulge in sharing ideas about the use of statistics in real-life problems.

In the second section the authors demonstrate practical applications of statistics with special reference to problems encountered in India. A wide spectrum of fields is covered, including public health, ecology, agriculture, social sciences, atmospheric sciences as well as market research. The discussion is cursory, however, reference to appropriate reading has been provided. The book is heavily inclined towards topics from the field of biology despite the title. Examples from other fields seem to be added as an afterthought, considering how detailed or better explained those from biology are. The constraints under which the authors had to operate to avoid making the book bulky are, however, understandable.

The concluding section deals with statistics education in India. The authors intend to change the perception of statistics from merely being a branch of mathematics to that of a tool to address societal problems. The inclusion of this section in an introductory statistics text is not apparent. However, the motivation of this section is to take statistics education beyond the realms of being an obligatory inclusion in the curriculum. The authors provide suggestions to help teachers of statistics to device their course intelligibly. The application of statistics in clinical trials is a fairly important one, however, it seems left too late and has been dealt with poorly. Reference to e-books and on-line datasets developed and maintained by experts in the field to enhance statistical teaching and learning has been provided.

In summary, the book is an easy read and the authors have done an excellent job of giving an overview of different statistical methods, allowing the reader to get comfortable with the theory and eventually think of real-life applications of the methods. The book fills a void in the literature which was long ignored: extending the knowledge of basic quantitative techniques and principles of data analysis to the common man. As a non-statistician myself, I feel that the readership of this book shall span a wide spectrum; from college-going or high-school students who lack sufficient understanding about statistics to young researchers who need to refresh some of the basic theories in statistics; from the curious layman who wants to learn new techniques to improve his/her business, to an expert who might look upon the book as an enjoyable afternoon read. While the efforts of the authors are commendable, the understanding of concepts banks heavily on the examples provided and the explanation of the theory is often neglected or is merely anecdotal. This runs the risk of the knowledge gained becoming rather superficial. However, as pointed out by the authors themselves, this book is not meant to be a textbook for learning statistics. For anyone considering applying the methods presented in this book, other sources are needed and ample references have been provided by the authors. In summary, the book achieves its objective of exposing the reader to a wide variety of statistical techniques and their applications without the burden of mathematical rigour, emphasizing on the fact that statistics, indeed, is for everyone.

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Pattern Recognition: An Introduction. V. Susheela Devi and M. Narasimha Murty. Universities Press (India) Pvt Ltd, 3-6-747/1/A and 3-6-754/1, Himayatnagar, Hyderabad 500 029. 2011. xii + 263 pp. Price not mentioned.

Nowadays, in India, pattern recognition is being taught in undergraduate and post-graduate computer science courses. In some institutions, as a part of the artificial intelligence course, some portions of pattern recognition are taught. Some universities are teaching pattern recognition as a part of data mining. This book satisfies the requirements of the teachers of all these courses. It contains several solved examples which bring out the essence of the subject. Students can learn the subject on their own by reading this book. Some chapters of this book are self-contained. The book, as a whole, provides an excellent introduction to pattern recognition.

Pattern recognition is also a mathematical subject. Topics like Markov models, support vector machines and discriminant analysis have a rich mathematical theory. This book provides the basic methods in these topics, and also provides good pointers for further reading. Ensemble classification is another important topic covered in the book. Normalization, different distances like edit distance, and cross validation are some of the other topics which have been dealt with adequately.

In a book like this, there is always a feeling that some topics could have been dealt with in more detail. But, looking at the target readership of this book, the authors have done a commendable job.

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