Visualizing Statistical Model and Concepts, R.W. Farebrother, Marcel Dekker Inc., 270 Madison Ave., New York, NY 10016, 2002, 249 pp., $135 (book).

The geometrical and mechanical modeling of fitting parametric equations to the observed data was espoused, thus the visualization based on the dynamics of minimizing the potential energy are explained.

As Mr. Farebrother pointed out in the conclusion remark: " It is to be hoped that this book will have given readers some impression of the contribution that geometrical and mechanical models can make to their understanding of statistical techniques, … However, these ideas should not be regarded primarily as potential sources of computational procedures or devices, but rather as a means of broadening student's understanding of the statistical techniques…". This book presented a welcome addition to enhance the understanding of statistical techniques being used.

Several topics especially interesting, which includes the duality between the observation space and the parametric space, various metrics, i.e. least orthogonal distance, L_p, least deviation, and more, applied to measure the distance as the optimization criteria and their implications in the geometrical or mechanical models are discussed, along with many regression techniques.

This book is long in discussing various ideas and short in providing a comprehensive discussions around a single topics in one place. An idea was mentioned when it happened and dropped without a completed treatment. May be, this is the intention of the author not to explore the idea any further to prevent overburden the content, however, it sacrifices in the flow and easy reading and understanding for the conciseness.

Overall, this book provides some alternative readings for understanding popular statistical techniques being used and taught. Thus, this book will benefits readers who are motivated to understand in depth knowledge of statistics.

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