

Item Response Theory: Modeling Psychometric Data

This book provides a detailed to item response theory (IRT), a powerful statistical technique for modeling psychometric data. IRT is used in a variety of applications, including educational testing, psychological assessment, and health outcomes research.



Item Response Theory by Robert D. Gibbons

★★★★★ 5 out of 5

Language : English
File size : 16829 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Print length : 366 pages
Lending : Enabled



What is Item Response Theory?

IRT is a statistical model that describes the relationship between the responses to a set of items and the underlying latent traits of the respondents. The latent traits are typically unobserved, but they can be inferred from the responses to the items.

IRT models are used to estimate the item parameters, which are the difficulty and discrimination of the items, and the person parameters, which are the latent traits of the respondents.

Applications of Item Response Theory

IRT is used in a variety of applications, including:

- Educational testing: IRT is used to develop and evaluate educational tests. IRT models can be used to estimate the difficulty of the items on a test, the discrimination of the items, and the reliability of the test.
- Psychological assessment: IRT is used to develop and evaluate psychological tests. IRT models can be used to estimate the validity of the items on a test, the reliability of the test, and the norms for the test.
- Health outcomes research: IRT is used to develop and evaluate health outcomes measures. IRT models can be used to estimate the validity of the items on a measure, the reliability of the measure, and the norms for the measure.

Benefits of Item Response Theory

IRT offers a number of benefits over traditional statistical methods for modeling psychometric data. These benefits include:

- Increased accuracy: IRT models are more accurate than traditional statistical methods for modeling psychometric data. This is because IRT models take into account the difficulty and discrimination of the items, as well as the latent traits of the respondents.
- Increased efficiency: IRT models are more efficient than traditional statistical methods for modeling psychometric data. This is because IRT models can be used to estimate the item parameters and the person parameters simultaneously.

- Increased interpretability: IRT models are more interpretable than traditional statistical methods for modeling psychometric data. This is because IRT models provide estimates of the difficulty and discrimination of the items, as well as the latent traits of the respondents.

Item Response Theory: Modeling Psychometric Data provides a detailed to item response theory (IRT), a powerful statistical technique for modeling psychometric data. This book is written in a clear and accessible manner, with a focus on practical applications and real-world examples.

IRT is a valuable tool for researchers and practitioners who work with psychometric data. IRT models can be used to develop and evaluate tests, scales, and other psychometric instruments. IRT models can also be used to conduct research on the psychometric properties of tests and scales.

About the Author

Robert Gibbons is a professor of psychology at the University of California, Berkeley. He is the author of several books and articles on item response theory. His research interests include the development and evaluation of tests and scales, the application of item response theory to educational testing, and the use of item response theory to study the psychometric properties of tests and scales.



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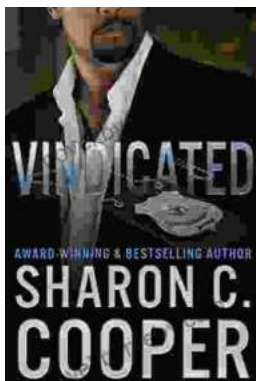
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