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Distance models for analysis of multivariate binary data

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Propositions

Belonging to the thesis

Distance Models for Analysis of Multivariate Binary Data

by Hailemichael M. Worku

1. Do not use latent variable models for analyzing multivariate binary data when there are only 2 or 3 indicator variables per factor with small sample size (Chapter 2).
2. Modeling the association parameter of bivariate binary data is equally important as modeling marginal distributions of the two binary responses (Chapter 3).
3. It is a powerful idea to represent logistic regression in a distance framework (Chapter 4).
4. The *mlm* package gives users of newly proposed multivariate logistic distance model the power to analyze multivariate binary data and visualize model results (Chapter 5).
5. Visualization is not only useful for explanatory data analysis, but also for confirmatory data analysis.
6. The multivariate logistic distance model tries to make a marriage agreement between the two *islands*, i.e., Psychometrics and Biostatistics.
7. Knowing statistics without a statistical programming skill is half the battle.
8. Advanced statistical models without data wrangling could lead us to misleading results.
9. Good supervisors give you the freedom to make mistakes.
10. Applied researchers should be open-minded to learn programming and data analysis.
11. Multitasking could be an efficient approach for machines, but not for humans.
12. Self-confidence should be nurtured.

Leiden, 10 October 2018