Regularized structured latent class models: Some applications with cognitive diagnostic models

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Abstract

In this talk, a regularized structural latent approach is proposed which contains many recently discussed cognitive diagnosis models (CDM). The framework builds on the specification of constrained latent class models of Anton Formann and contains regularization penalties for item parameters and latent class probability parameters. Connections to areas of methodological CDM research (CDM with discrete and continuous latent variables, differential item functioning, Q-matrix estimation, structured skill class distributions) are drawn.

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