

Generalized Linear Models

§ Name of instructor

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§ Short description

A Corner Stone: Exponential family, properties and parametrizations. Linear predictors. Link functions. Models for dichotomous data: logit and probit model. Counting data models. Models for categorical data. Ordinal data models. Estimation Methods, Indicators and Testing to evaluate the goodness of fit.

Further developments on categorical data analysis: Introduction. Inference and Methods of Estimation. Indicators and tests to evaluate the goodness of fit. Discussion of case studies.

§ Schedule

1. Basic principles of categorical data
2. Binary data models
3. Counting data & Log-linear Models
4. Polytomous data models

§ Background

Agresti A. (2013), *Categorical Data Analysis* (3rd Edition), Wiley: Hoboken, NJ.

§ Facilities Required

- Software: R, open source, with the R package Mass and ordinal installed
- Course Material. All course materials, including the data and R scripts for the examples, will be made available for course participants.