

Bayesian Model Averaging for Categorical Data

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It is common for multivariate categorical data (which may be represented as a contingency table) to be unbalanced or sparse, particularly when the dimensionality is large. Then, estimating cell probabilities, or predicting the unobserved population in a finite population sampling analysis, typically relies on some kind of modelling to provide smoothed estimates. In this talk I will investigate Bayesian model averaging as a estimation method for multivariate categorical data which allows multiple models to be entertained. I will discuss default choices of model class, and of prior distributions on model parameters, across a range of applications.