

Mixture extensions of linear models

John Hinde

National University of Ireland, Galway, Ireland

Abstract

Mixture models provide a highly flexible framework for making extensions to the basic linear model. This talk will consider some specific regression examples that illustrate the potential of mixture models for outlier detection/accommodation, to provide more general error distributions, and to allow for heterogeneous regression relationships. Estimation can be easily implemented using the EM algorithm for a finite mixture model and extensions using a mixture of experts model will be considered.

Keywords

Mixture models, Outliers, Non-normality.

References

Aitkin, M., Francis, B., Hinde, J., and Darnell, R. (2009) *Statistical Modelling in R*. Oxford.