

FlexMix: Flexible fitting of finite mixtures with the EM algorithm

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Finite mixtures are a flexible model class for modelling unobserved heterogeneity or approximating general distribution functions. The R package **flexmix** provides infrastructure for fitting finite mixture models with the EM algorithm or one of its variants. The main focus is on finite mixtures of regression models and it allows for multiple independent responses and repeated measurements. Concomitant variable models as well as varying and constant parameters for the component specific generalized linear regression models can be fitted.

The main design principles of the package are easy extensibility and fast prototyping for new types of mixture models. It uses **S4** classes and methods and exploits features of R such as lexical scoping. The implementation of the package is described and examples given to illustrate its application.