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Title: Heterogeneous data integration and normalization for psychosis characterization

Abstract:

Nowadays several data are available for diagnostic purposes. In particular, modern learning-based methods are able to integrate several aspects of the disease into the same decisional system for classification purposes. However, very often data are prone to heterogeneity because for example of age, gender, or parameter setting differences. In this talk we consider possible nuisance effects of age and gender differences across multicentric dataset, not correcting the data as a pre-processing step, but including the effect of nuisance covariates in the classification phase. To this aim, we developed a method which, based on multiple kernel learning (MKL), exploits the effect of these confounding variables with a subject-depending kernel weighting procedure. The proposed method is evaluated for First Episode Psychosis detection.