

SUPERMIX: SPARSE REGULARIZATION FOR MIXTURES

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Abstract: We will consider the statistical estimation of a discrete mixing measure μ^0 involved in a kernel mixture model. Using some recent advances in l_1 -regularization over the space of measures, we introduce a "data fitting and regularization" convex program for estimating μ^0 in a grid-less manner from a sample of mixture law, this method is referred to as Beurling-LASSO. Statistical performances of this estimator are investigated designing a so-called "dual certificate", which is appropriate to our setting. The classical gaussian framework will be discussed at the end for illustrative purpose.