NONPARAMETRIC LOGISTIC REGRESSION

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Abstract. A successful analysis of maximum penalized likelihood estimators invariably depends on some lucky accident. Here, "successful" is meant as in "near optimal asymptotic error bounds under the usual nonparametric assumptions". In particular, this excludes assumptions on densities, etc., being bounded away from zero on their support. Some succesful attempts include the analysis of the Good estimator and the nonparametric estimation of the entropy of a smooth density. Some unsuccesful attempts include the maximum penalized likelihood treatment of the nonparametric deconvolution problem (but recent progress has been made).

In this talk we describe the progress that has been made on maximum likelihood estimation with the Good roughness penalization for nonparametric "logistic" regression.

This represents joint work with Vince LaRiccia.