Mathematics > Statistics Theory

High-dimensional additive hazard models and the Lasso

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We consider a general high-dimensional additive hazard model in a non-asymptotic setting, including regression for censored-data. In this context, we consider a Lasso estimator with a fully data-driven ℓ_1 penalization, which is tuned for the estimation problem at hand. We prove sharp oracle inequalities for this estimator. Our analysis involves a new "data-driven" Bernstein's inequality, that is of independent interest, where the predictable variation is replaced by the optional variation.

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