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Title: Adaptivity and Optimality of the Convex Least-Squares Estimator

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We focus on estimating a convex regression function in a fixed point by the least-squares estimator (LSE). It turns out the rate of convergence depends on the local behavior of the underlying function rather than its smoothness class. This rate is uniform over shrinking L^2 neighborhoods of the original regression function, and it cannot be improved by any other estimator for all functions in the same neighborhoods. The result relies on a special characterization of the estimator due to Groeneboom, Jongbloed, and Wellner, which depicts the LSE as the second derivative of a cubic spline of the integrated data allowing us to isolate and control the variance associated with the model.