

Optimality of the Least Weighted Squares Estimator

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Abstract: The present paper deals with least weighted squares estimator which is a robust estimator and it generalizes classical least trimmed squares. We will prove \sqrt{n} -consistency and asymptotic normality for any sequence of roots of normal equation for location model. The influence function for general case is calculated. Finally optimality of this estimator is discussed and formula for most B-robust and most V-robust weights is derived.

Keywords: robust regression; least trimmed squares; least weighted squares; influence function; \sqrt{n} -consistency; asymptotic normality; B-robustness; V-robustness;

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