The local smoother may not be a symmetric global matrix, but each target's deletion is still a rank-one change to its local normal equations. The fixed bandwidth and basis are part of the theorem: adaptive bandwidth reselection after deletion requires a separate computation.

Comparative cost and preferred method

An already computed local fit and its inverse self-leverage yield the deleted residual with $O(1)$ additional scalar work per target. Computing all local fits is not eliminated: naive dense local design construction costs $O(N^2d^2)$ and N small factorizations cost $O(Nd^3)$. Repeating a complete smoother fit for each deletion would unnecessarily multiply the target work; a strong conventional implementation fitting only the held-out target has a smaller baseline.