
Algorithm 16.1 *Forward Stagewise Linear Regression.*

1. Initialize $\check{\alpha}_k = 0$, $k = 1, \dots, K$. Set $\varepsilon > 0$ to some small constant, and M large.
 2. For $m = 1$ to M :
 - (a) $(\beta^*, k^*) = \arg \min_{\beta, k} \sum_{i=1}^N \left(y_i - \sum_{l=1}^K \check{\alpha}_l T_l(x_i) - \beta T_k(x_i) \right)^2$.
 - (b) $\check{\alpha}_{k^*} \leftarrow \check{\alpha}_{k^*} + \varepsilon \cdot \text{sign}(\beta^*)$.
 3. Output $f_M(x) = \sum_{k=1}^K \check{\alpha}_k T_k(x)$.
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