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**Algorithm 1:** Backfitting algorithm

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1. Set  $\hat{\beta}_0 = \bar{y}$  and  $\hat{s}_d = 0$  for  $d = 1, \dots, D$

2. for  $d = 1, \dots, D$  do

    1. Calculate partial residuals:

$$\mathbf{e}^d = \mathbf{y} - \hat{\beta}_0 - \sum_{k \neq d} \hat{s}_k.$$

    2. Set  $\hat{s}_d$  equal to the result of smoothing  $\mathbf{e}^d$  with respect to  $\mathbf{x}_d$ .

end

3. Repeat 2 until convergence.

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