

Choice of Knots

- Approach I: ignore the selection of locations – by default, the knots are located at the quantiles of x_i 's, and focus on the selection of number of knots.

It can be formulated as a variable selection problem (an easier version, since there are just p models, not 2^p)^a using AIC/BIC/ m -fold CV

- Approach II: put a large number of knots, and then apply Lasso or Ridge.

^aBut note that when number of knots goes from K to $K + 1$, the underlying function spaces are not nested since the K knots and the $(K + 1)$ knots could be totally different.