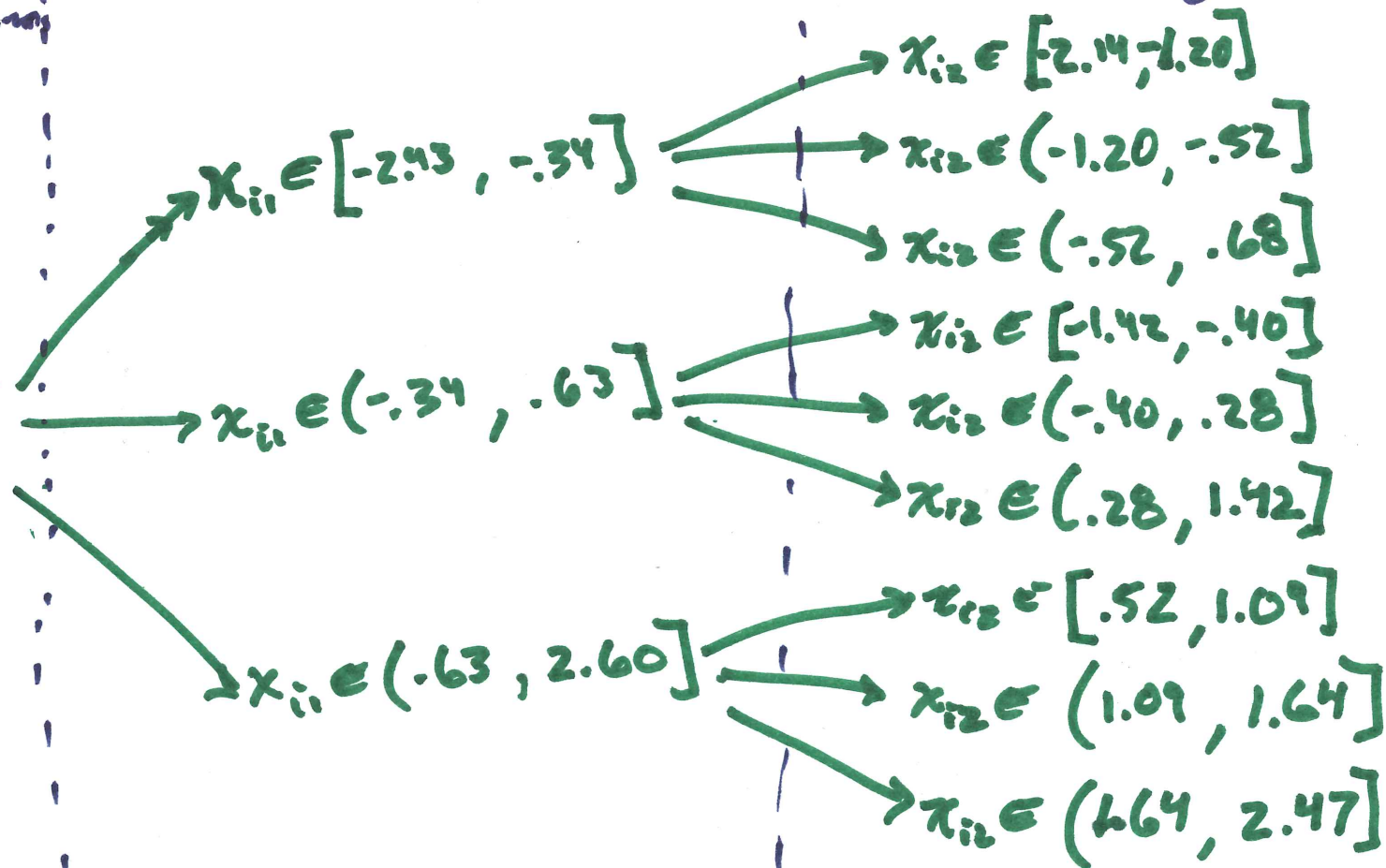


Step 0:

- specify order of columns
- set number of bins
 $S_1 = S_2 = 3$

$$X = \begin{bmatrix} x_{11} & x_{12} \\ x_{21} & x_{22} \\ \vdots & \vdots \\ x_{n1} & x_{n2} \end{bmatrix} \in \mathbb{R}^2$$

Step 1: $S_1 = 3$ partitions using x_{11} Step 2: $S_2 = 3$ partitions within each group from step 1



Nested interval R-tree

generated by iterative-quantile binning algorithm
for Example in Fig. 1